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ABSTRACT

This selection of papers from the First Conference on Tertiary Literacy, which examined the role of literacy as a foundation for knowledge acquisition and dissemination that influences the academic success of tertiary students, presents a number of case studies of policy and practice in Australian universities. Keynote addresses included: "Tertiary Language, Literacy and Communication Policies" (R.Baldauf, Jr.); "Institutional Practices in Promoting Tertiary Literacy" (L.Parker); "Some Questions About Integrated Communication Skills" (M.Garner) and "Which Thesis Did You Read?" (B.Kamler and T.Threadgold). Papers include: (1) "The Complexities of Tertiary Literacy" (D.Absalom); (2) Mediating Cognition and Culture: A Pilot Study of the Literacy and Academic Communication Skills of First Year Commerce Students" (C.Baskin and others); (3) "How Did We Get a Literacy Problem in Research Articles?" (R.Brown); (4) "Comparing the Citation Choices of Experienced Academic Writers and First Year Students" (J.Buckingham and M.Nevile); (5) "Expectations of Academic Writing at Australian Universities" (D.Bush); (6) "Teaching Difficulties Associated with Variability in Student Working Memory Capacity" (P.Casey); (7) "Peaks and Pitfalls of a Tertiary Communication Policy" (J.Catterall and R.Martins); (8) "The Teaching of Communication Skills in a Health Science Faculty" (M.Clugston); (9) "The Development of Information Literacy in Undergraduate Programs" (M.Coombs and J.Houghton); (10) "Critical Practice and Undergraduate Students" (H.Farrell and others); (11) "Literacy in the Disciplines: Giving Academics a Language to Talk About Language" (G.Ferguson); (12) "Tertiary Literacy: Case Study Research into the Literacy Policies, Definitions and Practices of Four Disciplines within a University"

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(M.Fiocco); (13) "Academic Discourse on the Internet" (J.Garton); (14) "Changing Literacy: Changing Teaching and Learning" (C.Ingleton); (15) "Social Identities and Literacy Practices" (B.James); (16) "Free to Write: On-Line Class Discussions" (R.Kivela); (17) "Abrasions: Dilemmas of Doing a Critical Literacy Pedagogy within/against the Academy" (L.Noone and P.Cartwright); (18) "Expectations of Tertiary Literacy: The Attitudes and Experiences of Lecturers and their LOTE Background Students" (A.Pearce and H.Borland); (19) "A Profile of the Novice Collaborative Research Experience" (C.Riddell); and (20) "Top-Level Structuring as a Basis for the Development of Tertiary Literacy" (K.Smith and D.Edwards). Also included are two poster presentations, "Tertiary Literacy in a Non-Traditional Institution" (J. Skillen) and "Lecturers' Perceptions of Student Literacy: A Survey Conducted at the University of Newcastle" (R. Woodward-Kron and A. van der Wal). A summary keynote address is titled "What Will Count as Tertiary Literacy in the Year 2000?" (T. Threadgold and others). (Contains approximately 300 references.) (BF)

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Policy and Practice of Tertiary Literacy

Selected Proceedings of the First National Conference on Tertiary Literacy: Research and Practice

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Policy and Practice of Tertiary Literacy

Selected Proceedings of the
First National Conference on Tertiary Literacy:
Research and Practice
Volume 1

edited by Zofia Golebiowski

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Introduction

The First National Conference on Tertiary Literacy: Research and Practice was held from 14 to 16 March 1996 at Victoria University of Technology. About 270 academics from Australia and overseas took part in the Conference's deliberations and shared their tertiary literacy experiences. The Conference examined the role of literacy as a foundation for knowledge acquisition and dissemination, and, thus, as a major factor influencing academic success of tertiary students. It addressed the question of responsibilities of higher education institutions for tertiary literacy and provided a national and, in many cases, international perspective on tertiary literacy and its reflection in the quality of university learning and teaching.

The Conference's call for papers asked for contributions within four main themes: *policy and practice of tertiary literacy, inter-cultural variation of academic communication, discipline specific discourses and research English.* The papers selected for these proceedings have been divided into two major groups: Policy and Practice of Tertiary Literacy in Volume 1, and Academic Communication across Disciplines and Cultures in Volume 2. However, the division of papers into these two volumes is to some extent arbitrary, as the practical models and applied knowledge provided by many papers spread across the themes.

This volume opens with plenary presentations by Richard Baldauf, Lesley Parker, Barbara Kamler and Terry Threadgold. Baldauf views literacy from an equity perspective, reviews existing tertiary literacy policies or efforts towards their formulation, and presents strong arguments for the introduction of literacy policies in all Higher Education institutions. Parker presents an example of what appears to be the most comprehensive institutional framework for the development of communicative competence introduced in an Australian university, while Kamler and Threadgold analyse the discourses and cultures of postgraduate pedagogy.

The papers in Volume 1 present a number of tertiary literacy case studies. The authors seem to be in general agreement about the need for institutional policies to regulate and legitimise literacy practices in Australian universities. Many papers emphasise the changing context of tertiary literacy, related to the extensive changes in the position and the role of tertiary institutions in the last two decades. The increased diversity of student population is being reflected in the increased diversity of tertiary curricula. The flow of global information is increasing, demanding new techniques and computer literacy. Additionally, the placement of prominence on communication skills by employers exercises pressure on universities to adopt policies and practices which would produce graduates with high level of literacy and communication skills.

The volume closes with a panel presentation "What will count as Tertiary Literacy in the year 2000?", which summarises the Conference deliberations, as well as throwing some light on future prospects in the field.

Due to a variety of publication and editorial problems, as well as the large number of papers submitted for consideration, these proceedings appear a little later than initially anticipated. I apologise to all Conference participants, as well as those who were not able to attend the Conference but ordered the proceedings, for having to wait for their appearance. As indicated to presenters when papers were requested for submission to the Conference proceedings, to limit the time lag and production costs, in most cases, the papers are published with minimum editing. The proceedings do not include all papers presented at the Tertiary Literacy Conference. Unfortunately, because of space constraints, we were forced to make some difficult decisions about which of the submitted papers to select.

Zosia Golebiowski
Conference Convenor
Melbourne, December, 1996.

Acknowledgments

I would like to express my gratitude to the members of the Tertiary Literacy Conference Reference Committee and various experts in Tertiary Literacy for their assistance in the process of the Conference organisation. I would particularly like to acknowledge Doug Absalom, Richard Baldauf, Brigid Ballard, Helen Borland, Kate Chanock, Wally Evans, Mark Garner, Susan Kaldor, Barbara Kamler, Andy Kirkpatrick, Jane Madden, Petre Santry and Terry Threadgold. Without their generous help and valuable advice the Conference would not have been the success it was.

I wish to thank the Conference sponsors: David Lawson on behalf of the VUT Faculty of Human Development, Liz Collins from Victoria University Equity and Social Justice Department, Ron Toomey from Victoria University Department of Education, Rosa McKenna, on behalf of National Languages and Literacy Institute of Australia, and Helen Borland from Victoria University Department of Communication and Language Studies. I would also like to acknowledge Grace Pulis and Kim Borg for their invaluable administrative assistance and Phil McCluskey for his patient typesetting revisions.

I am indebted to the Conference presenters for submitting their work for this collection. The success of any conference is primarily the result of the quality of the presentations and informal interactions of conference participants. My thanks are wholeheartedly extended to all who attended, and especially to those who presented papers on such a broad range of interesting topics. I trust these proceedings will make a valuable contribution to disseminating research and practice in Tertiary Literacy in Australia and internationally.

Zosia Golebiowski

Tertiary Language, Literacy and Communication Policies: Needs and Practice

Richard B. Baldauf Jr
National Languages and Literacy Institute of Australia
& James Cook University of North Queensland

Tertiary literacy consists of developing a complex set of skills which few if any students bring to the tertiary education. To meet tertiary literacy needs, higher education institutions (HEIs)[1] should develop comprehensive language and literacy policies, as such policies could improve institutional efficiency through better quality student work, improved rates of student success and produce better cross-cultural interactions. Coherent language policies could be developed in most HEIs by developing or formalising programs addressing six student equity and six institutional discourse issues. Examples of each issue and of aspects of overall language policy are discussed.

Introduction

While many university staff may still implicitly believe that high school / secondary school / college training provides, or at least should provide, students with the language and literacy skills necessary to gain a tertiary degree, many would also acknowledge that these skills must be developed and learned as part of tertiary study. While some staff may still yearn for the 'good old days' when tertiary literacy *may* have been less of a problem, but when only 4 out of 10 students completed a secondary education and where the secondary education system had as its prime focus tertiary study, most would acknowledge that the current more broadly based provision is more equitable and better suited to society's needs. However, it is not only secondary education and university selection that are different, but modern society has also changed, surrounding us with audio and visual material, partially displacing the written word, or making text available electronically via the Internet or on CD ROM. In today's world, even well prepared students may not be prepared for the oral, written and electronic discourse rigours of tertiary life. Nor in fairness should they be; tertiary study, like other social activities, has its own language domains, jargon and discourse, and its own way of being which neophytes must learn to be a success at the discipline(s) that they have chosen to study.

However, it is not only students' backgrounds and societal communication which has changed in the last thirty years. Universities themselves have significantly diversified their intake of students, both in terms of sheer numbers[2] and in terms

of student backgrounds[3]. They also offer a wider range of programs of study (e.g., nursing, primary teacher education) and choices of subjects within those programs. It would seem self-evident that modern tertiary institutions are, like other modern institutions, actually more diverse and demanding in their requirements than they previously were, including the requirement for a wider range of literacy skills. While HEIs have increased their support for students to help them cope with the new language, literacy and communication rigours which they must face, much remains to be done and some questions need to be asked. Why do so many students fail to complete their degree work or take longer than necessary to do so? Has the literacy support offered been adequate, coordinated and focused on students' real needs? Are lecturers and other staff aware of student literacy needs or have they forgotten what it was like to be a student? Why do university staff rate content knowledge so much more highly than language, literacy and communication skills, when professional bodies in those same disciplines rate those same skills as their highest priority for graduates?

From this brief introduction it should be clear that the principal issue in tertiary literacy is not about declining literacy standards but rather is about meeting changed social, cultural and informational requirements and circumstances (e.g., Luke 1993). The changing nature of language, literacy and communication means that HEIs must continually re-examine their language related strategies to see that they are meeting current demands. Given the complexity of the tertiary language, literacy and communication situation, HEIs must now go beyond individual programatic solutions, and develop an overall language, literacy and communication strategy or policy. My thesis is that if HEIs had clear formal language, literacy and communication policies, they could more systematically met student needs and would have mechanisms in place to meet the changing nature of tertiary language and literacy provision. As a result there would be efficiency gains in terms of time and money, but most importantly some of the current waste of effort and human potential would be avoided.

The Tertiary Literacy Conference Proceedings are organised around four themes. This paper addresses problems related to the *policy and practice in tertiary literacy* theme. I have chosen to develop this theme by focusing on twelve issues around which a tertiary language, literacy and communication policy could be based. In examining these issues, I argue that tertiary literacy can be viewed in terms of two general perspectives: 1) from a student equity perspective, with a focus on the needs and skills that individual students bring to the HEI situation, and 2) from an institutional discourse perspective, with a focus on those things that the HEI requires or has carriage of as part of the academic certification process. The issues found in the first of these two perspectives, "student equity", also relate to the proceedings' theme of the *inter-cultural variation of academic communication* while the second perspective, "institutional discourse", relates to the themes of problems found in *discipline specific discourses* and *research English*. For each of these two perspectives, I will argue there are six major issues which a HEI confronts. These twelve issues, which in reality overlap in a number of ways — as suggested by the four themes in the proceedings, form the basis of

what a HEI language and literacy policy might contain. The twelve issues are, in outline form:

1) the HEI *Student Equity Perspective* suggests the need for a tertiary language, literacy and communication policy to service:

- most secondary graduates,
- Aboriginal and Torres Strait Islander students,
- mature age students returning to studies,
- deaf and blind students,
- students from Non-English speaking backgrounds, and
- overseas students.

2) the *Institutional Discourse Perspective* suggests the need for a HEI language, literacy and communication policy to address:

- discipline specific literacy skills,
- the use of non-sexist (non-discriminatory) language,
- the acquisition of literacy skills in a LOTE,
- credit for recognition of prior learning (RPL) and LOTE skills,
- computer-related literacy skills, and
- electronic literacy and collaboration

In the following sections which briefly develop these issues I have tried, where possible, to provided a few specific, published examples. However, tertiary education is a broad canvas with much variation. Other papers in these conference proceedings provide much of the detail needed to understand these issues in the Australian context. To help inform this paper, I have examined some university handbooks / calendars, and have faxed a brief questionnaire to universities, to develop a tentative map of what universities say they provide in the way of literacy services for their students, and what specific institutional literacy requirements they make. Handbooks were taken as the starting point because they are HEI's official statements on student course and program requirements. These public documents and sets of requirements should, if they are not faulty, provide an indication of the language, literacy and communication requirements and provisions available to students[4]. Where possible, I have briefly discussed these findings as part of the discussion on each of the twelve issues. In the final section of the paper, some examples of university language and literacy policies are cited, and some overall conclusions are drawn.

STUDENT EQUITY PERSPECTIVE

The issue of ensuring equity in higher education, although not necessarily specifically related to language, literacy and communication needs, has been an Australian government priority for some time (e.g., see Postle 1995 for a recent review). While the term equity is normally used in the context of particular disadvantaged groups, in this paper I will use it to include all those disadvantaged. The six equity groups discussed in this section are somewhat arbitrary, in that the categories are not mutually exclusive (i.e., there are mature age Aboriginal

students, blind NESB students, English mother-tongue overseas students, etc.) nor fully inclusive (i.e., the usual equity issues of rural, isolated and low socioeconomic status students, while important in their own right, are not primarily language issues and are therefore subsumed under the variation that most secondary graduates bring to university)[1]. While there are many individual equity programs already in place in HEIs, there is a need to locate such language focused solutions in a holistic language, literacy and communication policy framework which would more comprehensively meet students' needs, and which would better prepare students for their studies and the world of work beyond the university. Jernudd (1994) has argued for this to occur, students must experience writing as a meaningful activity. This accords with the views presented in many papers in this Conference Proceedings that professional literacy is best taught in relation to discipline studies, combining language and subject expertise.

Finally, it is easy in discussing tertiary literacy in general and equity groups in particular to get caught up in a remediation mentality or to frame the language, literacy and communication issues just in terms of accommodation to the new university or subject specific cultures that are to be learned, rather than acknowledging the positive language, literacy and cultural contributions that the diverse groups of students bring to the HEI. Many current programs seem to be set up on a "fix the problem" model, although particular individuals working in these programs may operate from quite different perspectives. The advantage of a university language, literacy and communication policy approach to tertiary literacy is that it can be more than the sum of its parts. It can stress that language problems are not just issues for students, but for staff, and that there are not only problems to be solved, but cross-cultural understandings and information to be gained. Ultimately, HEIs will be most successful in dealing with language, literacy and communication issues if these matters are defined and supported at the top ("top down"), provided for through expert assistance where necessary, but contextualised across the HEI's curriculum by individual university staff. That is, policy needs to be developed in consultation with and have the commitment of those working most closely with the students ("bottom up").

1. MOST SECONDARY GRADUATES

While many people would probably be surprised to see the group *most secondary graduates* under equity perspectives, as McLoughlin (1995:38-39) points out, "the demands of academic literacy are quite unique to the context of the university culture" and there is, therefore, a case "for teaching of text structural patterns to *all* university students". Lee (1991: 133) has argued that language and literacy are the "vital keys to powerful learning, at *all* levels and in all disciplines." While not wishing to minimise the greater relative disadvantage particular groups may face in gaining a tertiary education, it needs to be said that, for most students, going to university is a cross-cultural experience and many students need assistance to make both the general transition to university life and to deal with a whole new set of literacy requirements for which they are often at best poorly prepared. As Bartholomae (1988: 276) puts it, tertiary students

> have to appropriate a specialised discourse, and they have to do this as though they were easily or comfortably at one with their audience. If you look at the situation this way, suddenly the problem of audience awareness becomes enormously complicated.

In Australian tertiary education, unlike North American universities where composition, writing and rhetoric courses are (and have been for many decades) requirements for all first year students[6], the development of a specialised tertiary discourse and audience has traditionally been left unstructured. Most Australian institutions don't have an introductory year in the North American sense, and don't offer "for credit" tertiary literacy courses, as such skills are still seen as "remedial", although more universities are beginning to require all disciplines to include communication skills in their programs. Literacy support for most students comes from learning assistance type centres, college tutours, first year lecturers[7] and tutors or from students' own experiences through trial and error, rather than being based on a general university policy designed to support students literacy needs.

2. ABORIGINAL AND TORRES STRAIT ISLANDER STUDENTS

Many HEIs have recognised the special responsibility Australia has for its indigenous people by developing specialist support programs for them and, more importantly, increasingly with them. Indigenous Australians bring to tertiary settings varying degrees of cross-cultural and linguistic differences with which both they and the HEI must accommodate if they are to succeed. Draisma et al. (1994: 39) state that "students entering university through equity programs are often inexperienced in understanding the language of the disciplines they have chosen". They then describe a successful initiative for teaching chemistry to Aboriginal nursing students using compatible learning techniques. The program demonstrates the need for early intervention and the article discusses the nature of the support and academic development that students require at university, and demonstrates the content, forms and processes of tutorial assistance that are required.

McDonald (1993) reports on the literacy development of a mature aged Aboriginal women, Bernice, who was enrolled in a tertiary education degree. Bernice reports that when she first came to university, "I'd never even seen an essay so when we were told we had to write one, I didn't have a clue" (p. 5). Important to Bernice's development as a writer was her sense of Aboriginality, the ability to get lecturers to make their assignment requirements explicit and being able to engage in oral discussion with her fellow indigenous students about their writing.

> In discussing the findings of the study with Bernice, Bernice was particularly concerned that [McDonald] should not underplay how hard participating in university education is for Aboriginal people. For marginalised minorities, becoming competent in the literacy practices of the dominant society involves more work than it does for those students

> who come from backgrounds that more closely reflect world views, norms and values of the dominant literacy practices of the university. (McDonald 1993: 13)

While the need to support indigenous Australians in tertiary study, where they are proportionally underrepresented, can not be over emphasised, other students have legitimate literacy needs as well. In this context, I would evaluate some of the "racist" comments I have overheard on HEI campuses about Aboriginal and Torres Strait Islander support programs as reflecting a realisation by other students that they too need literacy support, but haven't been getting it. As a part of a university wide language and literacy policy, Aboriginal and Torres Strait Islander support and studies initiatives would be contextualised as part of a range of literacy support structures. Perhaps more importantly, some of the things learned from these programs could be shared with the wider university community. These are comments that I think apply to most equity programs.

3. MATURE AGE STUDENTS RETURNING TO STUDIES

Dodson, Sharma and Haydon (1996) in a study which compared the performance of all categories of students entering undergraduate courses in 1993 and 1994 found that all groups performed comparably, with only those with prior tertiary experience showing better results. While mature age students (aged 25+) were shown to do as well as school leavers at HEIs, anecdotal evidence suggests that this may be because of greater maturity and commitment rather than equal language and literacy skills. Many mature aged students are returning to HEI study not having had the opportunity to finish secondary school. According to McCormack and Pancini (1991) what these students need

> to be able to do well at further study [is] to be able to write and that writing can be taught. Academic understanding is never just a matter of being able to discuss in class, or read and understand ideas. Not to teach writing is not to prepare students for the task ahead. (p. vi)

The first step in this process, as developed by McCormack and Pancini (1991) is to teach students to demystify and reframe notions of learning so as to understand the culture, context and conventions of knowledge. This provides a foundation on which writing can subsequently be taught and developed. In a further development of this work Moraitis and McCormack (1995) argue that

> to help students write a good essay we had to help them understand both 'ideas' (including their relationship to those ideas) and the structures and conventions of language which typically realised those 'ideas'. (p. 4)

These materials, which are based on years of teaching experience with mature aged students highlight the need to "enable students to participate in the powerful discourses used to shape, understand and reflect on modern society" (p.4). These are the discourses of higher education and students need to understand them and be able to control them to do well in tertiary study.

4. DEAF AND BLIND STUDENTS

Much of the work published on disabilities at the tertiary level deals with these issues in general terms rather than in terms of literacy specific concerns (see e.g., O'Connor and Watson nd, Power forthcoming). The government's emphasis on equity programs in recent years has increased disabled student participation rates and according to Power (forthcoming) since 1989 coherent policy driven disability support programs have become much more common in HEIs.

Griffith University, where disability programs are driven by an explicit policy document which is widely circulated within the University, provides a specific example of some of the types of disability services provided by HEIs.

> At the direct student service level the University provides interpreting, tutorial and aids support for deaf and hard of hearing students, a note taking service for any students who require it temporarily or permanently, Braille and large-print and screen magnification facilities for blind and low vision students, curriculum development and alternative assessment practices advice to staff and counselling support from a specialist Disability Support Officer. ... In most areas efforts are made to "mainstream" support services into those provided for all students, though it is acknowledged that some services are so specialist that special provisions need to be made. (Power forthcoming: 10-11)

Griffith and La Trobe (and through extension work Deakin and Monash) also teach Auslan providing some access to this language for all those in the university community who are interested to learn.

5. STUDENTS FROM NON-ENGLISH SPEAKING BACKGROUNDS

Dobson and Sharma (1993) in a study of determinants of student progress in Bachelor courses in Victorian HEIs in 1990 found that students who spoke English at home out-performed non-English-speaking students in terms of student progress rates. The nature of the language and cultural aspects of this issue is illustrated (in an American context) by Fiore and Elasser (1988: 287) in an article called "Strangers No More" which describes how the authors developed a writing skills curriculum for Chicanos, Blacks, Anglos and Native Americans

> which would help them succeed at [university] and carve a place for themselves in society. [The] students found themselves strangers in a strange world. A wide gulf stretched between the classroom curriculum and their own knowledge gained in the barrios of Albuquerque and the rural towns and pueblos of New Mexico. Confronted by a course that negated their culture, many failed to master the skills they sought. Others succeeded by developing a second skin. Leaving their own customs, habits and skills behind, they participated in school and in the world by adapting themselves to fit the existing order. Their acquisition of literacy left them not in control of the social context, but controlled by it.

While the TAFE situation is undoubtedly different from that found in universities,

the findings of a study by Lewis (1994) for NESB TAFE students in Western Australia may have some relevance to our understanding of this issue. Lewis (1994: 14) states

> [o]verall, it would seem that the situation is not as good as it should be for NESB migrant students in full-time TAFE courses, with the possibility they are disadvantaged in relation to ESB and overseas fee-paying students. While it has not been possible to date to separately identify these students as a group, 75% of the replies from lecturers indicated that they thought that NESB students as a group did not have sufficient English skills as a group to cope with their studies. Yet there are few resources devoted to helping migrants who are having trouble coping, either in terms of language support, ESL materials in libraries or professional help from staff who have designated responsibility for the well-being of these students and/or have undertaken some form of cross-cultural awareness training to make them more aware of the sorts of problems such students face.

While much is often made of the needs that some NESB students bring to tertiary settings because of their limited English literacy skills, these students may be doubly penalised as they often have home language skills which HEIs fail to recognise. In fact, background speakers in language classes can be seen as a problem, rather than a resource. Such bilingual literacy should be more effectively linked to educational outcomes and could contribute more to the cultural richness of university life.

6. OVERSEAS STUDENTS

Dobson and Sharma (1993) in a study of determinants of student progress in Bachelor courses in Victorian HEIs in 1990 found that Australian born students produced higher mean progress scores compared with overseas born students in a majority of institutions studied. However, McLoughlin (1995) in a study of Australian, Malaysian and Singaporean students' awareness of text structures found no significant differences between Australian and Singaporean students, but differences between both groups and the Malaysian students. These results suggest that while language is an important influence on students' abilities to cope with tertiary study, that it is also important not to stereotype students and to consider culture and other factors.

Nicholls (1995) has described the impact that overseas students have had on universities in general and at the University of Adelaide in particular. With the coming of the era of no quotas and full fee paying overseas students, universities have begun to market themselves overseas, raising substantial funding in this manner. Numbers of students are rising each year (69 819 in 1994) and at the ten HEIs attracting the largest number of overseas students, average enrolments amount to 10.1 per cent and enrolments have been steadily increasing. Nicholls makes some suggestions about how the lot of the seven per cent of students from overseas at the University of Adelaide could be better supported including: by improved academic support, special bridging and university introduction

programs, writing some theses in a LOTE, twinning with a student trying to learn the overseas student's LOTE, offering Bahasa Indonesia/Malaysia — the language of many overseas students at the university, staff development related to NESB students and a greater appreciation of cultural and linguistic diversity.

Finally, Nicholls (1995:45) comments:

> Today, language specialists suggest academic language is a problem for all new enrolments. As McGowan writes, "[f]or any student who enters university, there is a bewildering variety of language to be learnt in their different subjects and social encounters" ("Modelling" 2). This causes ESL lecturer, Barbara Wake to wonder why insights "applicable to 16 000 students at Adelaide University are in the main offered only to FFPOS and NESB students.

STUDENT EQUITY SUMMARY

This brief overview of six student equity perspectives indicates while there are major differences across groups, that most groups face many of the same general literacy problems, but these manifest themselves in different ways and from different perspectives. These groups also bring linguistic and cultural skills to HEIs which are often under-valued. Many commentators on these equity issues have noted the similarities and suggested the wisdom of sharing knowledge. A university wide language policy could provide more effective and coherent language and literacy planning thereby improving opportunities for all students to succeed.

INSTITUTIONAL DISCOURSE PERSPECTIVE

To be successful in any organisation or field, one must learn the specific domains of discourse relevant to that field. At the tertiary level, a number of different discourses must be mastered depending on the situation. For example, a first year education student (in a concurrent 4 year BEd) may not only have to learn the epistemology and citation rules for education, but to keep them differentiated from those of English, History and Psychology. Thus the discourse to be learned is not only new, but often conflicting with others to be learned. Furthermore, much of this discourse knowledge is what Martin (1990) has referred to in the Aboriginal context as 'secret knowledge'. Although my limited survey results suggest this may be changing, in general lecturers do not teach much of their disciplinary discourse explicitly, or even point it out. Rather they assume such things are taught elsewhere or that it will be part of HEI's rites of passage (i.e., if you aren't smart enough to figure it out, you shouldn't be in a HEI.).

In addition, some of the groups mentioned in the previous section, under student services may bring their own epistemology of language, which frames their views of textual authority and discourse argumentation, to the HEI setting (see e.g. McKnight 1994 for Chinese, Eggington 1992 for traditional Aboriginal people). While the 8th Mayer competency, culture, suggests that such skills and perspectives should be valued for what they can add to a situation (Cope et al.

1995), it is uncertain at best whether this is the case. Now let us turn specifically and examine the six institutional discourse issues.

1. DISCIPLINE SPECIFIC LITERACY SKILLS

Every discipline has its own discourse and set of citation and presentation rules. Baldauf and Jernudd (1986) have outlined some of these language use issues as they relate to cross-cultural psychology and Jernudd and Baldauf (1996) have prepared an overview paper on the field of language use in the journal literature more generally. It is clear from this work that many university researchers themselves do not really consider or understand the language use decisions of their discipline, and, as editors of disciplinary based journals know only too well, some academics don't fully understand the formal discourse structures or requirements of their discipline, probably because their own supervisors never taught that discourse to them.

If many in the academy are under-prepared for writing for their discipline, how well can these staff prepare their students to be able to comprehend and write these discourse forms (both in the formal presentational sense and in terms of making meaning of the discourse)? In a paper prepared for a national review of education literacy training, Lee (1991: 139) found student preparation wanting and has recommended that "the undergraduate curriculum should include specific training in literacy related to the disciplines." How and to what extent is this being done? Are the presentational and discoursal forms formally discussed or are students just expected to be able to "pick it up"? The survey results suggest this is a matter of Faculty or Departmental policy. My own experience as a lecturer in education where students were concurrently doing other disciplines as major and minors is that even by the final year of the education program, many students had still not fully untangled the discipline specific literacy skills. A HEI language and literacy policy would make clear the responsibilities both students and staff had to learn and use discipline specific literacy and discourse forms.

2. THE USE OF NON-SEXIST (NON-DISCRIMINATORY) LANGUAGE

Universities all are required to have policies related to equal opportunity provision and the use of non-sexist language. Although non-sexist language is becoming a part of standard English expression, Pauwels (1993) among others would argue that non-sexist language issues have not found their way more generally into language policy. As a matter of policy, how do HEIs handle the issue of non-sexist language in student work? Is it assumed it is the norm now in English and therefore can be ignored, or is it formally presented in discipline based subjects? Do lecturers call it to the attention of students, or is it like many other language matters, a non-content issues to be ignored? A HEI language and literacy policy would focus attention on the norms expected of students and staff in this area.

3. ACQUISITION OF LITERACY SKILLS IN A LOTE

Rado and Foster (1991) have argued, albeit not in the tertiary education context, that the advantages of bilingual literacy can be justified on pedagogical, personal, social and economic grounds. To what extent does a HEI promote the development of bi-literacy and for what purposes? Can language studies be done in conjunction with other degrees (e.g., such as a concurrent language diploma at Melbourne or in combination with other studies as at Monash and Griffith)? Should a HEI language and literacy policy promote bi-literacy, even if only for the potential advantages it provides for its graduates (see e.g., Cavalier 1994)?

4. CREDIT AND RPL FOR LOTE

The acceptance of credit transfer between universities and the recognition of prior learning (RPL) (from TAFE or other outside work/study) has become more prevalent in HEIs in recent years. Haydon (1994) reports that the total intake into higher education accepted with RPL increased from 7.1 per cent in 1991 to 16.4 per cent in 1993. At the post-graduate level the NLLIA has completed a project which aimed to facilitate RPL in the language and literacy area. The project examined some of the options available for cross-accreditation and the recognition of prior learning in the "language" area, a report was produced and a database (XCREDIT) was established on which this information is available (Baldauf, et al. 1995).

In the context of tertiary language and literacy, credit for LOTE skills are the most obvious candidates for RPL. Are students able to get credit for either placement credit or credit toward their degrees for language skills they possess? If so, how is this done, through advanced standing in beginning courses based on HSC / VCE results, through placement exams, etc.? Or, are student's language skills ignored or seen as uncreditable for university purposes? My own experience with RPL dates back to my undergraduate days in the United States when after taking national advance placement exams, I received 12 placement credits (nearly a semester's credit) for two introductory history subjects. Because of this I was able to replace 1/3 of my subjects in my major with advanced work, and my study of history was far more interesting. To give another example, at the University of Hawaii, overseas students could not be credited with basic or intermediate ESL subjects, but having successfully completed them they were able to sit for exams in their own languages and get RPL credit for an equivalent amount of study in their language as their ESL. A HEI language policy would make the position of RPL in LOTE much more transparent to students entering university programs.

5. COMPUTER RELATED LITERACY SKILLS.

Many students enter HEIs with computer skills that are equal or better that those of their lecturers or tutors. Some universities in the United States make the purchase of a computer a compulsory part of university tuition charges and student rooms in colleges are all wired into the computer network. Most universities in Australia provide easy access to their computer facilities for

students through computer labs and dial in modem access. In other words, in HEIs, as in many businesses, there is a growing expectation that students will be computer literate - in both the technological and literacy senses. Leaving aside the questions of equity of access to equipment, which relate to the equity issues previously discussed, does the university offer students computer literacy training or is this a skill students are expected to bring to university? Are there policies related to the use of computers for assignments, are standard programs required (e.g., Microsoft Word 6 format, Autocad, or Statistica)? Can students use on line dictionaries, reference grammars and translation programs in language courses? Computer literacy raises both questions of the provision of skills and those of access and equity? Such questions should be addressed as part of an overall language and literacy policy.

6. ELECTRONIC LITERACY AND COLLABORATION

In an article in the 13 February *Australian*, Marc Rotenberg was asked whether there is "a coming conflict between copyright and cyberspace". His answer was that

> We're in for some big changes on the copyright front. It's a mistake to regard the Internet as a distribution mechanism for copyright materials. One of my criticisms is that some of the copyright proposals represent attempts to transform the Internet and make it accommodate copyright. It may be the case that copyright-holders are going to have to adjust the way they work to the nature of the Internet rather than the other way around. (1996:28)

The impact of computers in the wider world is having an impact on student writing beyond the technical questions discussed in the previous section. Computer access to text and graphics as well as the ability of individuals and groups of students to co-author, edit and comment on other students' work, is having a significant impact on the quality and nature of university work produced and potentially on rules for citation and plagiarism. Winkelmann (1995: 431) argues

> that teachers in the humanities must relinquish the vestiges of non-electronic criteria in their assessments of electronic literacy. Instead, the interplay of human and technological factors in the classroom leads to a reaffirmation of literacy as a social process. ... The viability of static criteria for good literacy practices vanishes with electronic literacy.

What guidelines do universities have in place to deal with electronic literacy? Survey results indicate some HEIs have guidelines in place which allow electronic collaboration. What experience do most lecturers have with this phenomena? These issues are not just related to the humanities, but to all disciplines, and to all levels. The 8th grade assignments my wife receives from her Indonesian language students in Canberra are almost all done on the computer and many already show the early signs of electronic literacy through the use of maps and graphics. How much easier is it at HEIs where students are all networked and

where they are increasingly accustomed to work collaboratively on group projects for electronic collaboration to occur?

INSTITUTIONAL DISCOURSE SUMMARY

The six institutional discourse perspectives do not as yet seem to have become university issues, but by their very nature seem to be left mainly to Faculties, Departments or even individual lecturers to handle. A university wide language and literacy policy would make for a more equitable administration of these policies and would help students to more quickly and accurately obtain the skills necessary for their discipline studies and ultimately for their professions.

DEVELOPING A UNIVERSITY LANGUAGE POLICY

The idea of developing a university language policy seems to be a relatively recent one. Dines (1994) proposed the idea in a paper to the Australian Linguistics Society in 1993 when "thinking aloud" about all the issues related to linguistics which had recently come across her desk as Academic Registrar at the University of Adelaide. She noted that:

> [a]s a policy maker I think it is folly to try to deal with a smorgasbord of issues which clearly are interrelated. What universities need is a way of bringing these issues together so that they can be systematically addressed within a cohesive framework and linguists are the people professionally equipped to do this. (p. 14)

She went on to argue that there is a need

> ... to lobby for the development of language policies in your institutions. Every university needs a language policy which addresses language issues across the whole university in a coordinated and systematic way. It should not be just a language centre policy or a section of the Faculty of Arts' strategic plan. It needs to be a university wide language policy, embracing all the diverse issues which university senior management need to address: (p. 15)

After examining the dramatic growth in overseas and NESB students, Mühlhäusler (1995b) and Bennett (1995) have continued to argue the case for the University of Adelaide developing a language policy, but Mühlhäusler (1995b) concludes the response to date has been ad hoc rather than driven by clear long term goals. He notes that while language policies have been developed at the Commonwealth and State levels, universities, despite their increasing internationalisation, have generally failed to take up the challenge. Mühlhäusler (1995a) has also argued cogently for the inclusion of low candidature languages in any university language policy.

While not a language and literacy policy per se, the *Report on Learning Assistance Provision* at Griffith University (Gardner 1994, Parra 1995) has many of the features of a *literacy* policy, only it is broader. It takes up many of the literacy issues discussed in this paper and commits learning assistance at Griffith to

form a coherent whole which supports lifelong learning. It looks at meeting the needs of many of the equity groups and supports information literacy. The Universities of Canberra and Newcastle (Woodward-Kron 1995) have also completed literacy surveys to gauge staff perceptions of students' literacy needs.

The University of Western Sydney - Macarthur has a "competencies policy" in place which states that "all students commencing an undergraduate degree course from 1993 onwards must satisfy non credit competency requirements in computer literacy and communication skills" (Calendar 1966: 52). This policy, which initially was instituted on a top down basis to help "sell" UWS-Macarthur graduates to employers, has much to recommend it, but also has its pitfalls (Catterall and Martins 1996, this volume). Taken together with policies on credit transfer and plagiarism, these policies go some way to form an explicit communication and literacy policy. The Conference Proceedings (may) also contain a number of other examples of university literacy policies including those for Curtin University of Technology (Fiocco 1996, Reid 1996, Reid and Mulligan 1996).

The *language* policy challenge has been taken up by Monash University and based on a study by Clyne, Pauwels, Newbrook and Neil (1995), which surveyed university language needs, a fifteen point language policy was developed and accepted. The twelve substantive recommendations include 1) explicit communication activities be made part of all discipline training, 2) staff induction include cross-cultural communication training, 3) the use of non-discriminatory language, 4) a language and learning centre be established, 5) standard faculty correction guides for student work be produced, 6) cultural variation in the perceptions of plagiarism be recognised, 7) combined language and professional training programs be established, 8) the purchase of LOTE software be made, 9) a commitment to teach some languages of limited enrolments be made, 10) the offering of Aboriginal languages and Auslan be explored, 11) class sizes in practical LOTE classes be limited, and 12) proficiency levels across languages be pegged to international standards.

From these brief examples it is clear that universities are already beginning to think about language and literacy policies and some have even made important progress in developing a comprehensive approach to language or literacy issues. However, what has been done to date does not amount to a coherent broadly based language *and* literacy *and* communication policy as advocated in this paper. The Curtin, Griffith and Western Sydney - Macarthur materials fail to confront the language specific issues, while the Monash language policy doesn't address some of the broader questions of tertiary literacy. Some of the papers in the Conference Proceedings will undoubtedly address the communication issues (i.e., professional needs), but will they do this in terms that consider language and literacy?

DISCUSSION

This paper has outlined the rationale for developing a HEI language, literacy

and communication policy, has indicated some of the student equity and institutional discourse needs which might make up such a policy, has provided some preliminary examples of how HEIs are meeting their language and literacy responsibilities and has looked at a few examples of how such a policy has been attempted. Perhaps because the development of a comprehensive language, literacy and communication policy is so complex, it is a job which still largely remains to be done. However, if the bipartisan development of the National Policy on Languages shows us anything, it is that the development by HEIs of language and literacy policies in situations of conflicting interests is possible. The question is, "Do those involved with tertiary language, literacy and communication feel it is important enough to do?"

Part of the answer to this question will depend on the necessary research being done. Lo Bianco (1993) has said that in adult literacy, there isn't much published research which establishes the links between literacy data and social consequences, in this context between literacy skills and success at university. The conference and these Conference Proceedings, have put a focus on tertiary literacy and have provided a forum for raising questions and for presenting much needed data on tertiary literacy issues. Perhaps, it may also eventually be the stimulus for developing tertiary language, literacy and communication policies.

While the focus of this paper has been on arguing the case for a language, literacy and communication policy, the problem is, of course, embedded in a much deeper set of issues. It is not "merely" a question of dealing with literacy issues or even of cross-cultural issues, but with all the issues that implicate the whole cultural ambience of the university.

> Regardless of language background, people from cultures of poverty see the world differently (see the work of S. B. Heath and James Gee). This problem implicates modes of dress, modes of social discourse, attitudes toward information, skills involved in identifying and locating material, personal hygiene, hair styles, etc. [Just as a 'language-across-the curriculum course' or a 'foreign students centre' or an 'Aboriginal studies centre' does not deal with the problems HEIs face,] a language policy, as desirable as it is, can be a snare and a delusion because, by itself, it does not address the fundamental issues and may even obscure them because it looks like a solution. (Kaplan 1996: personal communication).

There is a need to see all of these issues as part of a world view which informs the university's whole outlook on students and which would then provide a general framework for the successful implementation of a language, literacy and communication policy.

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[1]The focus of this paper is primarily on universities and I use HEIs mainly in that sense, although some of the issues clearly relate to TAFE literacy needs, and to the need for language and literacy policies in that area. The paper relates to what is referred to by Brennan (1993) as the adult and community education and to the school literacy sectors only indirectly in as much as these two sectors provide clients for universities.

[2]In 1939 there were about 14 000 students while in 1995 there were around 600 000. The proportion of the 17-22 year old age cohort in under-graduate HEI programs rose from 3.75 per cent in 1955 to 16 per cent in 1975 to about 30 per cent in 1995 (Postile 1995: 1).

[3]Ian Reid (1995: 4) writes that "it has been estimated that students whose native language is not English now comprise up to 25 per cent of the university population in some states. At least one-third of these are from overseas, largely from the Asian region. Most of them have considerable bilingual skills and bring rich linguistic potentialities to what they study. But not only do Australian universities often fail to draw creatively on those resources to enhance the scope for cultural exchanges across the whole learning community, they also often fail to provide adequate support — inside or outside the classroom — for students whose own first-language literacy practices differ significantly from those that are normative in Australian academic settings".

[4]It should be noted that university handbooks / calendars are complex documents and it was not always easy to find or identify information relevant to all of the 12 sub-headings. The authour would welcome any further information related to any of the issues presented in the paper.

[5]The depth of the urban-rural divide is great. It has been said that people living in Athens, Tokyo or Sydney have more in common with each other than they do with their own rural and isolated citizens.

[6]However, Emeritus Professor Robert B. Kaplan (1996: personal communication), who has worked in this area for many years would argue that the very existance of such courses is a problem.

> People have come to believe that because the requirement exists, the problem has been eliminated. Wrong! Freshman composition courses teach the wrong literacy — a literacy literacy, not an academic literacy. They tend to ignore the categories of students enumerated in the paper — Blacks, Chicanos, resident and alien non-native speakers, blind, deaf, Native Americans, Puerto Ricans, Samoans, Haitians, Vietnamese, Hmong, etc. — in part because these populations are under-represented in the tertiary population, in part because — having opted for "open admissions" — HEIs have to have some weeding out mechanism. When I was an undergraduate it was organic chemistry, but now its basic literacy.

[7]A lecturer, who had recently spent a number of years teaching ESL undergraduates overseas, once commented on how when blind marking final exam papers, she was surprised to find she had so many ESL students in her first year education class. When she came to record the grades in the mark book, she realised that almost none of these students came from an ESL background.

Institutional Practices in Promoting Tertiary Literacy: The Development and Implementation of a University-wide Policy for Enhancing Students' Communication Skills

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This paper reports on the strategies adopted at Curtin University of Technology to provide systematically for the development and enhancement of students' communication skills. It provides an overview of the development and dissemination of a University-wide policy, which took account of the major strengths and weaknesses revealed by an institution-wide survey of the provision for communication skills. The paper focuses in particular on the "communication-in-context" approach advocated in the policy, an approach which supports attention to students' literacy skills within the context of the various disciplines in which they are working. It then provides some examples of what we at Curtin see as best practice in the implementation of this aspect of the policy, drawn from a variety of disciplines across the University. The paper concludes with a short discussion of what can be learned from the Curtin experience.

The Curtin Context

Curtin University of Technology is a relatively large, multi-campus institution, with approximately 21,000 students and 3,000 staff. It was established as a university in 1987, 20 years after its founding as the Western Australian Institute of Technology. Structurally, the University has four teaching divisions (Curtin Business School; Engineering and Science; Health Sciences; Humanities), two Branches (the Muresk Institute of Agriculture, approximately 140 km from Perth; the Western Australian School of Mines, at Kalgoorlie, approximately 500 km from Perth) and three support divisions (Academic Affairs; Finance and Property; Research and Development). Each of the Divisions and Branches is further subdivided into School and Areas, which are regarded as the basic organisational units of the University. The institutional administrative structure is rather flat, with considerable responsibility and authority devolved to Divisions/Branches

and Schools/Areas. Decisions regarding University-wide policy on academic matters are made by the University Academic Board (UAB) and passed on in the form of recommendations to the University Council for final approval. UAB and its sub-committees (which include the Teaching and Learning Advisory Committee) are all bodies with representation from across the whole University, thus providing structures within which, at least potentially, the University as a whole can "own" and address issues.

For many years, Curtin, like other universities, has had in place a number of initiatives to assist students with literacy-related skills. In September, 1993, however, a paper produced by a member of staff from the School of Communication and Cultural Studies drew attention to the ad hoc, uncoordinated nature of these initiatives and raised serious questions regarding their effectiveness (Macintyre, 1993). UAB considered the paper. With some urging from the Deputy Vice-Chancellor of the Division of Humanities, (whose concerns in this area were well known [e.g. Reid, 1994]), UAB agreedto provide funding for a project to be undertaken by the Teaching Learning Group, to explore the questions and issues which had been raised. Essentially, there were three stages to the project, involving first, an analysis of background documents and research bearing on the issue of tertiary literacy; second, an analysis of the current provision within Curtin for supporting the development of students' communication skills; and, third, a stage which ultimately became one of policy formulation and promulgation.

STAGE 1: ANALYSIS OF THE LITERATURE

The literature review conducted during the first stage of the project revealed that increasingly, in English-speaking countries, literacy and communication skills are being recognised as having considerable bearing on many aspects of tertiary students' academic and professional progress. These skills and abilities are identified as fundamental to an individual's effectiveness as a professional practitioner and lifelong learner (Candy, Crebert & O'Leary 1994) and are shown repeatedly to be a key issue in graduate employability (Australian Association of Graduate Employers 1993; Bate & Sharpe 1990; Institute of Chartered Accountants in Australia 1994). Thus it was clear, from a number of different sources, that because highly developed communications skills, including, especially, the ability to communicate in a variety of contexts, are essential outcomes of a university education, they need to be planned for systematically.

For Australia, it was also clear that the increasing internationalisation of universities and the increasing cultural diversity of the university student population are adding a further imperative to the above case for systematic planning. There was considerable evidence that growing numbers of cross-cultural, overseas and Non-English Speaking Background (NESB) students are having a profound impact on teaching and learning in universities. In many cases, providing these students with an effective learning experience was identified as a considerable challenge for university lecturers, because the language, learning

styles and modes of communication of the students and their lecturers derive from very different cultural, intellectual and pedagogical traditions. Indeed, researchers such as Burns (1991) have shown that even migrants who have studied English for most of their school days experience considerable linguistic problems at university level. Highlighting the obligation of higher education in regard to this issue, the Ethnic Communities' Council of New South Wales has emphasised that universities need "to recognise that admission to courses, *per se*, is not enough" and that strategies must be developed and monitored to ensure that linguistic and cultural backgrounds are taken into account in the teaching of NESB students (Senate Standing Committee on Employment, Education and Training, 1990, p. 117).

Part of the literature review also involved the synthesis of information about tertiary literacy provided by key practitioners in Australian and overseas universities (e.g. Cowen 1993; McLeod 1990; Puhl 1992). This synthesis indicated that contextually-based approaches to the development of students' communication skills were proving to be particularly effective at the tertiary level. Approaches identified as less effective were those which relied on one-off out-of-context, sessions (e.g."essay writing"); those which focused on surface features of communication rather than seeing communication as an extension of thinking and an aid to learning; and, worst of all, approaches which relied on the enthusiasm and goodwill of a handful of staff to provide support for student literacy.

In general terms, the successful, contextually-based approaches involved the introduction of students to the conventions and genres of particular disciplines as an integral part of teaching within that discipline. They tended to encourage student-centred learning, based on real-life experiences, which were seen as authentic by the students. They also focused on a range of communication skills (including, as appropriate to the discipline, graphics, team-work and negotiation) and, in many cases also developed other important life-skills such as problem-solving, time-management and leadership. They were closely integrated, not only with the teaching of the discipline, but also with the assessment, in that the kinds of assignments set, the criteria for marking, and the timing and quality of the feedback given all reflected the high priority placed on communication within the discipline.

STAGE 2: A CASE STUDY

The second stage of the study focused specifically on Curtin. It consisted essentially of a survey of units with a communication-skills focus available to undergraduate students at Curtin in Semester 1, 1994; and follow-up interviews with 25 University staff either directly concerned with these units or with a special interest in students' communication skills.

This stage provided the basis for a critique of strategies used traditionally at Curtin for the development of students' communication skills. It revealed that, historically, the major provider of communication skills assistance was the School

of Communication and Cultural Studies (CCS), which had been offering communication units since the mid-1960s.. Elsewhere within Curtin (i.e. independent of CCS) other attempts to develop and enhance students' communication skills were occurring through:

- the implementation by many individual staff of strategies for improving the quality of students' writing;
- generic and discipline-specific foundation/ bridging/ support units offered by individual Schools and the Centre for Aboriginal Studies;
- study skills/writing sessions provided by the University Counselling Service and the International Office;
- individual support available on a limited basis through the University Counselling Service and the International Office;

The success of this combination of strategies was difficult to gauge. Over the years, very few of these efforts had been monitored or evaluated in any formal or documented fashion, so there was no reliable information to use as a basis for making any judgments. There was one piece of data bearing on students' communication skills, namely the responses of Curtin graduates to a questionnaire item focused on communication skills, in the 1993 Course Experience Questionnaire (CEQ) administered by the Graduate Careers Council of Australia (Curtin University, Institutional Research Office, 1994). More than two thirds of those responding to this item indicated that their courses had improved their written communication skills, but the degree to which a University-wide response to such a global item is useful was somewhat questionable.

This stage also revealed a number of weaknesses in the Curtin system. It was found (and reinforced later by the research of Bell [1994]), that the communication skills support which was available at Curtin was not being utilised fully and further, that there were a number of reasons for this underutilisation, for example:

- timetabling constraints;
- lack of lecturer awareness regarding the necessity for the communications support, stemming from a belief that students have achieved the English entry standard and therefore do not require further study in this area;
- traditional attitudes amongst other staff – in the words of one staff member: "Everyone thinks students' communication skills are important, but many lecturers still want someone else to provide them or fix them";
- late recognition of students' need for further language studies (e.g. not until near the end of Semester 1, when first assignments are submitted);
- lecturer stereotypes of certain nationalities (e.g. a belief that Singaporeans do not require language/cultural support because so many of them have studied within an English-medium system).

Overall, the review established the need for:

- a formal structure to facilitate system-wide coordination of the provision

for students' communication skills development/enhancement;
- a clear system for assessing and channelling students into support units;
- students (especially NESB and off-campus students) to receive communications skills support within their courses of study, provided in an integrated, ongoing, systematic way throughout their whole course of study;
- evaluation of units or support offered;
- systematic monitoring of the quality of students' communication skills.

In the interim report produced at this stage of the project an attempt was made to conceptualise the existing strengths of Curtin in the area of communication skills development, and to indicate that much could be learned from, and built upon, some of the traditional ways of operating. At the same time, the draft report identified weaknesses such as those outlined above and proposed ways in which the institution needed to change in order to take account of recent research in this area and its application to the changing context of Curtin (in terms, for example, of the increasingly multicultural student body). The analysis presented in the draft report provided a basis for framing some draft recommendations for future action in this area. In preparing the draft recommendations, cognisance was taken of resource constraints (especially in relation to the high cost of mandatory, universal literacy testing procedures, or of individual, one-on-one support for communication skills development) and of the need to not impose additional burdens on teaching staff.

STAGE 3: POLICY FORMULATION AND PROMULGATION

The third stage of the project began with the circulation of the draft report and recommendations throughout the University. There followed several months of consultation, discussion and negotiation of the recommendations with a number of key groups and individuals and the incorporation of the reactions of these bodies into the final report of the project. Overall, the responses to the draft report indicated a preference for communication skills to be defined broadly (i.e. to include not only oral and written communication, but also graphical communication, and interpersonal and negotiating skills), and for these skills to be assessed and developed in the context of disciplinary studies. A number of Divisional and School responses cited research promoting the idea of "discipline-specific" or "domain-specific" skills development, rather than the development of "content-independent" communication skills and strategies. During this stage, it also became clear that at least two other strategic initiatives at Curtin were congruent with and supportive of recommendations for a system-wide approach to the teaching of communication skills within the context of disciplines. These were the Strategic Plan for Teaching and Learning (see Latchem & Parker, 1995) and the Cross-Cultural Education Policy (Campbell, 1994).

The final report and its recommendations (Latchem, Parker & Weir 1995) were approved by the University Council in December, 1994 and endorsed for University-wide distribution. The report contained the following statement of

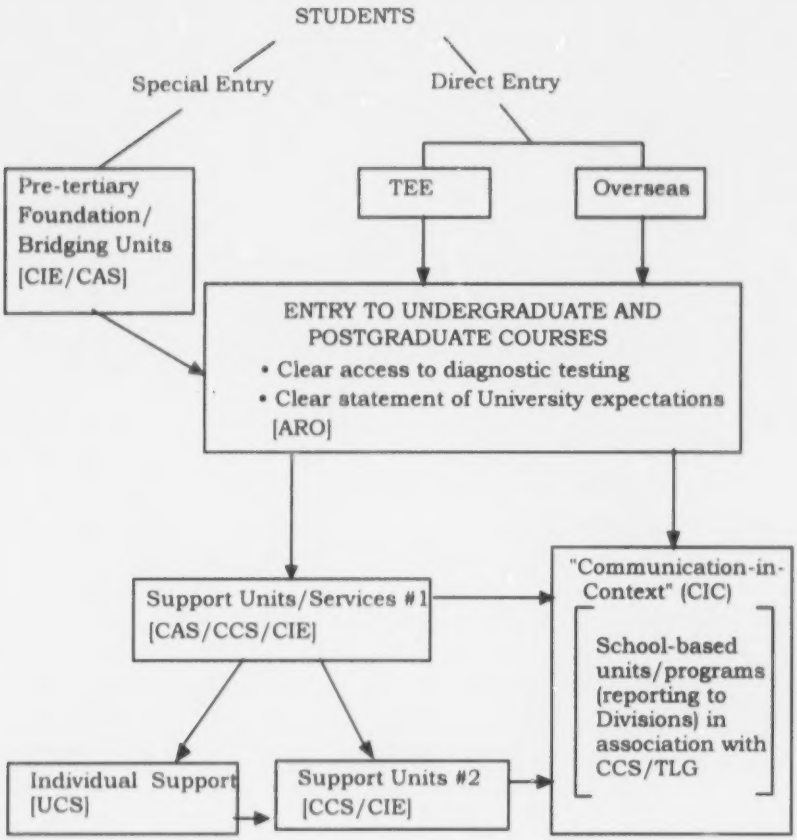
University policy:

> Curtin University recognises the diversity of social, cultural and linguistic backgrounds among its students, and is committed to the development of programs and practices which aim to provide all graduates with:
>
> - a high level of oral, writing, graphical, interpersonal and negotiating skills;
> - the ability to obtain, organise and communicate information from a variety of sources and for a variety of audiences in general, discipline-specific and professional contexts;
> - the ability to present, discuss and defend views with superiors, colleagues, subordinates and the general public;
> - the ability to empathise and communicate with persons from a variety of cultural backgrounds.

The University also endorsed a system of pathways for developing students' communication skills (as shown in Figure 1) and approved the establishment of a widely representative Communication Skills Reference Group to advise on institution-wide coordination in this area. As shown in Figure 1, although the pathways included some specialist support units for students with specifically diagnosed needs, the aim ultimately was for all students to be developing their communication skills "in context", through School-based units and programs, conducted with the assistance, where appropriate, of staff from the School of Communication and Cultural Studies or the Teaching Learning Group. Thus the project as a whole resulted in a framework for a new, more systematic approach to the provision of communications skills for all Curtin students, with an emphasis on "communication-in-context" approaches.

CURRENT ACTIVITIES: IMPLEMENTATION OF THE POLICY

In many ways, the flagship of the implementation of Curtin's new policy took the form of two series of weekly lunchtime seminars (running over a six-week period, during each of Semester 1 and Semester 2, 1995). These were organised by the Teaching Learning Group, under the auspices of the Communication Skills Reference Group. At these seminars, a number of experts in the communications area, together with practitioners who were implementing, or planning to implement, a "communication-in-context" approach in their teaching, shared their strategies and experiences with other staff.



Key:
ARO = Academic Registrar's Office
CAS = Centre for Aboriginal Studies
CCS = School of Communication & Cultural Studies
CIE = Centre for International English
TLG = Teaching Learning Group
UCS = University Counselling Services

FIGURE 1: PATHWAYS FOR THE DEVELOPMENT OF COMMUNICATION SKILLS AT CURTIN UNIVERSITY OF TECHNOLOGY

Although many of the presenters had been active in the area of communication for some years, the new policy gave their activities extra legitimacy and a higher profile and, at the same time, stimulated other staff to develop and implement innovative approaches. As shown in the complete list of contributors to these seminars (see Appendix 1), the 41 presenters included a wide range of academic staff (and, in some cases also students) from across the University and presentations covered topics as divergent as project and thesis writing, plagiarism, special needs of NESB students, graphical communication skills, oral presentation, and effective assessment strategies for developing communication skills. Most seminars were well-attended and, from staff comments and from activities subsequent to the seminars, it is apparent that many staff both enjoyed and learned from the wide variety of approaches presented.

The following seven examples capture something of the variety of approaches stimulated by the communication-in-context policy, or implemented in association with it. Some of these projects are being developed further in 1996, under the auspices of a Commonwealth Office of Staff Development Grant.

1. A COMMUNICATIONS UNIT IN PHYSICS: A STUDENT-ORGANISED CONFERENCE

In the Department of Applied Physics, a staff member involved with the communications unit offered to second year students considered that this unit could be improved in terms of its relevance to students' needs. He restructured the unit around the range of communication skills required to organise a professional conference. As described in Zadnik and Radloff (1995), the new approach involved students taking the initiative in the planning and presentation of an actual physics conference for staff and Year 11 students from local high schools. The physics students engaged intensively in the following sequence of activities: negotiating the conference theme, arranging for an external keynote speaker, preparing papers, publicising and organising the event, and editing the conference proceedings. In the monitoring and evaluation of this program, students' responses to the mid- and end-of-semester questionnaires showed that they felt that they had acquired many useful life skills and had been actively involved in a highly relevant learning experience.

This restructured unit has now been offered twice, with the second version placing more emphasis on teamwork and interpersonal skills. The feedback from students was again very positive. A resource package to assist staff in the adaptation of this approach to use in other disciplines is currently being developed,

2. CROSS-CULTURAL NEGOTIATIONS IN MARKETING VIA VIDEOCONFERENCING

The Curtin Business School has, for some time, provided a semester-long program in negotiation skills for third year students of Marketing. As described by King and Hedges (1995) and Puls and King (1995) this has been developed, more recently, into a cross-cultural negotiations training program. In this program, 10 final year Curtin Business School Commerce students on the University's main campus in Perth engaged in an extended period of negotiation with 16 Singaporean students of Chinese, Malaysian and Indian backgrounds, enrolled

in a program run in conjunction with the Singapore Polytechnic. Two-way video/two-way audio compressed digital video-conferencing facilities were used to link the two campuses thousands of kilometres apart. Through two elaborate role-plays, involving negotiations over possible joint ventures in the People's Republic of China, the two groups of students, working from their different social and business cultures and traditions, were able to experience the challenges, uncertainties and rewards of taking, keeping and yielding power in cross-cultural business negotiation. From students' reactions to the program (Figgis, 1995), it is clear that, although this particular learning experience left the students feeling rather vulnerable at times, its success lay in its realism and its stimulation of a self-reflective approach to planning and engagement in the process of negotiating.

3. LITERACY IN MEDICAL SCIENCE: A SCHOOL-BASED POLICY

In the School of Biomedical Sciences it was found that a major obstacle to the development of literacy among students was the lack of a policy on literacy and writing quality. As described by Budd (1995), the nature of communication in Medical Science demands an integrated approach to the teaching of literacy-based skills, because no one single dimension of literacy can be treated without reference to the others. In order to develop an appropriate School-based policy, Budd began with a thorough assessment of current practices within the School and of resources available within the School. At the same time, she identified, especially from the Competency-based Standards for Medical Scientists (Commonwealth Information Services, 1993), the literacy skills considered essential for Medical Scientists, together with a range of strategies for integrating these skills into students' courses of study. All of this material was used as the basis for a policy to be implemented across the whole School. To date, Budd considers that a major benefit of the project has been the increased interaction among staff members from different disciplines within the School, and greater cooperation and collaboration in relation to the achievement of common, literacy-related objectives for students. She anticipates, however, that the policy will have a number of benefits for students in terms of

- emphasis on the importance of literacy in Medical Science
- establishment of firm standards of literacy in Medical Science
- familiarisation of students with literacy conventions in their academic field
- promotion of a consistent set of literacy practices among various disciplines within the School
- production of quality graduates, meeting the expectations of professional and employer bodies.

4. STAFF FRAMEWORKS FOR ACTIVE DEVELOPMENT OF STUDENTS' LITERACY SKILLS: CENTRE FOR ABORIGINAL STUDIES

Since the beginning of 1995, the Centre for Aboriginal Studies has been piloting some literacy initiatives in its Health Work courses. These include mapping some of the course competency statements on to the National Framework of Adult Literacy and Numeracy Competence and using the learning cycles and

pointers provided in the National Framework documents to facilitate the use of language and literacy in a highly conscious way in teaching and learning. In addition, a literacy profiling tool has been developed and used, and has proved to be successful in providing detailed linguistic and cognitive descriptions of the language behaviours that students demonstrate in their work. This is useful both to students and to lecturers, with the latter able to be far more conscious of their own linguistic behaviours when structuring lecturing. In 1996, some staff at the Centre are implementing an extension of the earlier work, through a project which sets out to give teachers and students more opportunities and confidence to experiment with mainstream literacy skills in a way that is focused and also contexualised politically and historically.

5. SCHOLARLY WRITING FOR POSTGRADUATE STUDENTS IN HEALTH SCIENCES

This project is being conducted in the Division of Health Sciences, using a six-stage action research approach, beginning with one series of focus group sessions involving postgraduate and senior undergraduate students, and a parallel series of sessions for staff who are supervising students. The purpose of the sessions is to document any difficulties students encounter with scholarly writing, from both student and staff perspectives. A workshop and self-paced materials on scholarly writing are being developed based on information obtained from the focus group sessions and will be piloted later this year with volunteer students and staff. The pilot will be evaluated and the materials modified in accordance with the findings of the evaluation, and published (Taylor, O'Connell & Radloff, forthcoming).

6. COMMUNICATION AND INTERPERSONAL SKILLS FOR COMPUTER SCIENCE STUDENTS

Another example of the teaching of communication skills "in context" comes from the School of Computing, where feedback from employers of Computer Science graduates provided the stimulus for development of two units dealing with technical writing. As described by Kessell & Kessell (1993), the first unit, which is taught jointly by the School of Computing and the School of Communication and Cultural Studies teaches written and keyboard communication in the context of describing a computing process and product. The second unit focuses on communication in the context of real-world tasks, such as a 20-minute oral presentation, the preparation of a tender or sales proposal, and the composition of a memo to a client or to a colleague working on a team project. It also includes a "mock" job interview, which is conducted in front of a panel consisting of both staff members and experienced interviewers from outside the University, and which is videotaped so that students can critique their own performance. Feedback on this unit, from students, graduate and employers has been very encouraging. A somewhat similar major initiative is being implemented by the Muresk Institute of Agriculture in 1996.

7. COMMUNICATIONS ACTIVITIES IN THE SCHOOL OF NURSING

The School of Nursing has implemented a number of initiatives in the area of communications, including a School-wide policy on incorporation of communication skills in syllabuses and assessment procedures. One especially interesting example of the implementation of such a policy involves a group who worked with a theatre professional to use drama to teach about death and dying in general and maternity settings. O'Connell, McNae, Watts, McKelvie and Burgum (1995) provide an account of this initiative. They describe the development of the drama script from an interview with a patient with a life-threatening illness; indicate how the script centred on the patient's thoughts, feelings, responses, perceptions of exemplary care and views about incidents which generated anxiety or anger; and outline how the script was acted out to Nursing students by students from the University's theatre-arts section. Both short-term and long-term feedback from the Nursing students on this teaching strategy were overwhelmingly positive. O'Connell et al (1995) summarise the benefits of using drama as a teaching strategy in terms of "making links" – "linking students to the realities of practice, linking students to the ones experiencing care, linking students and staff to other sources of learning, and strengthening the links between learner and teachers" (p. 193).

WHAT CAN BE LEARNED FROM THE CURTIN EXPERIENCE?

Standing back from this Curtin experience in the development, dissemination and implementation of a University-wide policy focused on the enhancement of students' communication skills, it is important to consider both the positive and negative aspects.

Clearly, Curtin "got it right" in a number of ways. First, and partly fortuitously, the activities contained a complementary blend of top-down, bottom-up and stakeholder input. In a "top-down" sense, there was, at an institutional level, a structure (namely, the widely representative University Academic Board) which facilitated University-wide ownership of the issue. There was also, at senior executive level, an advocate for the issue, in the form of the Deputy Vice-Chancellor, Division of Humanities. In addition, there were other strategic initiatives already in place (e.g. the Strategic Plan for Teaching and Learning and the Cross-Cultural Education Policy) which provided important points of intersection with the issue of communication skills. At the same time, in a "bottom-up" sense, there were concerns at the grass-roots level, which committed staff found both the time and the energy to formalise as well-argued documents (e.g. Macintyre, 1993). Further, both ends of this continuum were reinforced by feedback from employers which highlighted the importance of students' communication skills.

Second, the policy development stage was based on an analysis which was both broadly comprehensive and Curtin-specific. It acknowledged the existing strengths of Curtin in this area and incorporated these in the new policy and pathways wherever possible. In addition, the process of development of the

policy was based on extensive consultation and negotiation, involving the reconciliation of at times conflicting perspectives and agendas.

Some of the barriers to the success of these processes are also readily identifiable, however. As with any innovation in a university, one of the major barriers is time – staff already feel overburdened by heavy workloads and, quite reasonably, feel unable to take another initiative on board in their day-to-day work. In addition, amongst some staff, there are entrenched attitudes which work against the idea that communication skills are the responsibility of all staff – these staff see themselves only as subject matter specialists and prefer to shift responsibility for students' communication skills to the students themselves, the secondary schools, the University admissions procedures, or "specialists" located elsewhere. Finally, there is the problem of effective dissemination of exemplary practice in this area and the need for innovative approaches in this regard is paramount. These are all challenges for staff development – challenges which dictate the need for special funding if they are to be met effectively. Thus, in the context of the the ever-present budgetary constraints in universities, communication skills initiatives have to compete for their place.

CONCLUDING COMMENTS

This case study of Curtin's approach to the enhancement of students' communication skills has reinforced a point made by many speakers at this conference, namely, that a relevant policy, preferably explicit, is a necessary starting point for improvements in this area. The policy gives legitimacy to activities in the area and provides at least one criterion for individual lecturer, School-based and Divisional accountability, especially if linked to criteria for promotion and to measures of accountability stated in Schools' and Divisions' strategic plans. The Curtin case study has also shown, however, that a policy, while necessary, is not a sufficient condition for constructive action. Commitment from staff at all levels of the organisation is required and, in this sense, we recognise that the implementation of Curtin's "communication-in-context" policy requires a cultural change. For many staff, it entails a shift away from practices which involve "someone else" taking responsibility for students' communication skills, towards a model where each individual lecturer assumes this responsibility, within a discipline-specific context. Clearly, staff development and School-based initiatives are essential for the implementation of Curtin's new policy. Indeed, as demonstrated in the examples provided in this paper, such initiatives have begun already, and now need to be consolidated through a variety of avenues for disseminating best practice.

AUTHOR'S NOTE

This paper encapsulates the work of many staff at Curtin who have shown an outstanding commitment to the enhancement of students' communication skills. In particular, I wish to acknowledge the input of my own colleagues in the Teaching Learning Group – Associate Professor Colin Latchem, Ms Alex Radloff

and Ms Jennifer Weir. In relation to the first section of the paper, describing the development of the policy, I also acknowledge feedback from colleagues at the Annual Conferences of the Higher Education Research and Development Society of Australia (Rockhampton, July, 1995) and the Australian Association for Institutional Research (Perth, November, 1995).

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Appendix 1: PARTICIPANTS IN THE "COMMUNICATION-IN-CONTEXT" SEMINARS CONDUCTED AT CURTIN UNIVERSITY OF TECHNOLOGY, SEMESTER 1 AND SEMESTER 2, 1995.

Name	Division	School/Area	Title of Session
Professor Ian Reid	Humanities	Teaching Learning Group	What is the Communication-in-Context Policy and how does it relate to the Teaching and Learning Strategic Plan?
Associate Professor Colin Latchem	Academic Affairs	Teaching Learning Group	
Associate Professor Lesley Parker	Academic Affairs		
Ms Maria Fiocco	Humanities	International English	What do staff, Students, employers and professional bodies consider to be the key communication skills which graduates need?
Ms Jennifer Weir	Academic Affairs	Teaching Learning Group	
Ms Alex Radloff	Academic Affairs	Teaching Learning Group	
Associate Professor Andy Kirkpatrick	Humanities	International English	What communication skill needs do different student groups (NESB, ESB, undergraduate, postgraduate, off and on campus) have?
Ms Chris Kaputin	Academic Affairs	Teaching Learning Group	
Mrs Daphne Sands	Postgraduate Student		
Ms Melissa Robinson	Student Guild		
Ms Sue White	Humanities	Library and Information Studies	
Mr Bob Fox	Academic Affairs	Teaching Learning Group	
Ms Di Courtney	Health Sciences	Biomedical Sciences	What are some ways in which communication skills can be developed in context?
Mrs Judy Sampson	Health Sciences	Biomedical Sciences	
Ms Jeanne Dawson	Curtin Business School	Accounting	
Dr Mario Zadnik	Engineering & Science	Applied Physics	
Mrs Joanne Samson	Humanities	Education	

Ms Dianne Budd Mr Clive Maynard Ms Lorraine Haw Associate Professor Owen Watts	Health Services Engineering & Science Health Sciences Humanities	Biomedical Sciences Computer Engineering Nursing Education	What policies and procedures relating to curriculum and assessment which support communication-in-context are Schools/Faculties developing?
Ms Barbara de la Harpe Ms Alex Radloff Mr Peter Radloff Associate Professor Darrell Fisher	Humanities Academic Affairs Health Sciences Engineering & Science	Education Teaching Learning Group Nursing SMEC	What are some effective teaching and assessment strategies which support the development of communication-in-context?
			Project and thesis writing
Professor John Robins Professor Peter Reeves Ms Kate Caelli Leanda Verrier	Academic Affairs Academic Affairs	Teaching Learning Group Teaching Learnng Group	Supervisor perspectives Supervisor perspectives Student perspectives
			Discipline specific communication skills
Associate Professor Steve Kessell Dr Matthew Allen	Engineering & Science Humanities	Computing Science Social Sciences & Asian Lang.	Improving communication skills in science degrees. Thinking better means better communication: the experience of teaching and learning in Applied Reasoning 200
			Plagiarism
Ms Tonia Naylor Associate Professor Kevin McKenna	Academic Affairs Curtin Business School	Teaching & Learning Group Economics & Finance	Plagiarism: the Curtin context Development of a policy on plagiarism in the School of Business

			Communication skills support for ESB and NESB students
Associate Professor Andy Kirkpatrick	Humanities	International English	Intercultural Communication units
Ms Ursula Pantelides	Humanities	Comm. &Cultural Studies	Communication skills units
			Graphical Communication skills
Dr Ric Lowe	Humanities	Education	Graphics and communication
Mr George Borzyuskowski	Humanities	Design	Visual communication skills
			Classroom strategies to improve student communication skills
Mrs Judy Sampson	Health Sciences	Biomedical Sciences	Group learning and oral presentations
Ms Alex Radloff	Academic Affairs	Teaching Learning Group	Peers giving feedback on student drafts: how they do it at Harvard
			Communication skills at Muresk
Ms Cathy Bowen	Mursek	Mursek	Communication skills: student needs
Ms Libby Weatherford	Mursek	Mursek	The Writing Centre
Ms Louise Horgan	Health Sciences	Nursing	Communication in cross cultural settings From Brunei and beyond: facilitating cross cultural communication in Nursing education
Ms Chris King	Curtin Business School	Marketing & Management	Facilitating cross cultural communication in the classroom

Some Questions about Integrated Communication Skills Programmes

Discussion of plenary panel session: Institutional Practices in Promoting Tertiary Literacy, by Lesley Parker (pp 20-36 of this volume) and Roslyn Petelin (not included in the proceedings).

Mark Garner

Educational Services Unit, La Trobe University, Bendigo

We have been presented at this conference with a number of very imaginative courses which integrate literacy and communication skills into the academic disciplines. I have been asked to comment on them, and in doing so, I will not comment in detail on their obvious merits. I want to run the risk of playing leader of the opposition, and ask some serious questions. The risk is that, like many an opposition leader, I will seem to be merely sniping and point-scoring. There is nothing I can do about that, except to hope that my sniping and point-scoring may help us to do a little better our difficult job of improving students' communication skills.

I speak from experience with integrated courses, indeed, I introduced several such courses at my own university. Despite all I am about to say, I still believe in them - I think. And let me point out in advance that this is not a carefully argued paper based on painstaking research. I shall refer mostly to courses centring on writing skills, as most of those we have seen of that sort, but my comments apply equally well to oral communication skills. Those comments will consist simply of a few stories and a few questions. They are questions easy to ask but hard to answer, but answer them we must if our work is to be effective.

The essence of integrated courses is to incorporate communication skills into mainstream academic subjects. The subject-matter of the discipline becomes the material on which the students' skills are practised. It is obvious that no-one communicates in the abstract. Communication is always about something, and what better for the students than to communicate about the subjects they have chosen to study? In this way we enhance their motivation and their focus.

Integrated courses also involve subject specialist lecturers. These lecturers need to co-operate with us in reorienting their curriculum, assessment, and teaching. The skills focus alters - one might almost say disrupts - the normal flow of the subject, and requires a very great collaborative effort. We must ask if that effort is well directed.

First, consider the role of the subject specialist in integrated courses. When it comes to communication, the majority of academics probably range from just competent to utterly incompetent. It is rare to find someone who is both an

expert in a particular discipline and an expert at communicating. Most articles and books published in every discipline are not very well written. I know from experience in teaching courses on writing for students of engineering, science, social science, and even the humanities, how hard it is to find good examples of academic writing. Of course, every discipline can point to a few of its eminent figures who are (or were) outstanding writers. But they are not many, and the same writings tend to recur in exemplary anthologies. In case you think I am being hypercritical, try a little test. If you had to provide some first-rate models of writing within your discipline, would you recommend the latest issue of an academic journal? How many of the introductory texts would you recommend as fine examples of clarity and style?

Let me relate a little scene, which I transcribed from memory immediately after it occurred. A first-year primary education student, a keen learner, fresh from a successful teaching round, came to me for help. He had the air of exhaustion, tinged with panic, of one who had to lead a tutorial that afternoon on a reading he had wrestled with in vain. "I just can't get my head round it," he said, rapping himself on the forehead. "I seem to think I'm all right, then I get to this sentence and it all goes blank again." I took the book, an introduction to classroom teaching, and read the sentence, brightly highlighted and surrounded with his desperate handwritten notes:

> Effective communication and instruction enhance intrinsic motivation indirectly through their influence on teacher-related, subject-related, and school-related affect.

For just one moment, I thought it was a brilliant stroke. Were the authors emphasizing the need for effective communication by deliberately writing in such an obscure manner? A brief glance through the book disappointed. The whole text was a miasma of deadening verbiage.

With sigh, I translated: "It means that good teaching motivates the students, because they like the teacher, the subject, and the school."

> "Oh, is that all?"
> "In essence, yes."

His face lit up. "They're right, you know. That's exactly what I found on the teaching round."

Perhaps the saddest thing was that he seemed to feel no impatience that such a simple, important point should be expressed so obtusely. There was no impatient shaking of the head, no cry of "Why can't they say what they mean?" He seemed to have accepted that academic writing is just like that; it's not meant to be accessible to a mere undergraduate.

Whatever the *intellectual* merits of that particular book (or of the journals I have asked you to imagine) it was scarcely an example of the sort of writing we would choose for our students. And the likelihood is that the subject specialists who will collaborate with us in integrated skills courses will write (if they write

at all) in much the same way. To some extent, this is perfectly understandable. It is a rare gift to be able to detach oneself from the meaning of a text enough to notice the language by which that meaning is expressed. But unless our colleagues can do so, and can express themselves in a sufficiently exemplary way, their participation in our courses may have quite the opposite effect to what we hope.

The situation can be even worse. Some years ago, I was asked by the staff in one of our major medical faculties to help design a course on communication. Some members of the faculty felt that too many medical graduates lacked the interpersonal skills which are vital to successful medicine. Our planning was well advanced when a very senior member of the faculty, an eminent surgeon, stopped us dead. There was no room in the crowded medical curriculum for such distractions, he told us. The solution was quite simple: "If any of the students want to learn about communication, just tell them to follow me on one of my ward rounds." I am sure I do not need to tell you that it was precisely his type of brusque, condescending approach to communicating that the more progressive members of staff were hoping to avoid in their students.

It is bad enough if the academic staff we try to involve in our integrated communication skills courses are themselves not good models of communicating. But what if they imagine they are? It may be worse for the students to be taught by such self-confident but inept people than to have no specialist teacher at all.

There is yet another problem. Recently, at a seminar on postgraduate supervision, the issue was raised of the role of the supervisor in developing the student's writing ability. I pointed out there is no particular reason why a supervisor - even one who is a good writer - should be able to teach students how to write: even many professional writers can't. It seemed to me, during the discussion that followed, that nobody quite understood the distinction. The assumption is widespread that being able to write implies being able to teach others to write. Not long before, a science lecturer had asked me to help him with an honours unit, Writing in Science. A senior colleague of this lecturer objected. "Why should you have to spend your time doing that?" he asked me, "He's one of the best writers in the faculty."

So we cannot simply assume that collaboration with the subject lecturers will result in good communication courses. What if they are themselves not good communicators - and, worse, what if they imagine they are? In any case, why should we assume they will be able to teach communication skills? The most sensible approach may be that taken by the head of Engineering at my own university. After an unsuccessful attempt at involving one of his staff in a report writing course I teach in the department, he said to me, "Look at it from an engineer's perspective. If we need a specialist job done on site, we sub-contract an expert; we're not interested in doing the job badly ourselves. You're the expert: we'll sub-contract you."

Now for another little vignette. It takes a bit of stretching to make this one fit the question I want to raise, but it's such a good story that I can't resist using it. A few years ago, a student came to me for help. He was worried because he was

becoming so stressed in the weeks leading up to the exams that, so his friends told him, his personality changed. He became argumentative and aggressive, impossible to get along with.

I talked to him about relaxing. Had he any hobbies; did he like listening to music, going to films, reading? Did he like sport? No, to all of them. Trying another tack, I asked if there was any way he had of releasing his aggression. A sauna or spa? What about vigorous physical activity: long runs to get rid of pent-up emotion? Did he visit the gymnasium and lift weights or hit the daylights out of the punching bag? I struck a chord. Yes, he did visit the gym, he said, every week: to judo classes. Didn't judo relax him? No, he didn't know judo himself. Then why did he go to the classes? To teach them meditation, he said.

> At last! "Well, there's your answer," I said. "Meditation is an excellent way of coping with stress."
>
> "Oh, no, I only teach it for the money; I think it's a load of rubbish."

This is another issue we have to face. What if our academic colleagues teach writing, as it were, for the money, but actually think it's a load of rubbish? In case you think this improbable, reflect for a moment. How seriously are communication skills courses regarded by staff - or students? How highly regarded, as academics, are those who teach them? If you gain the collaboration of a subject specialist, is it more likely to be the professor or a young sessional tutor? How many academics would drop one of their specialist units to work with you?

Of course, very many academics deplore the standards of literacy among students. Quite a few are pleased when they hear that a course in communication skills is being offered. I suspect it will be along time, nonetheless, until these courses are regarded as anything more than a regrettable evil, until they are seen as a proper scholarly activity, worthy of serious academic attention.

I come to my final little scene, and the doubt it raises in my mind. I began my academic career twenty-odd years ago as a lecturer in language studies for trainee secondary English teachers. The English Education world had just discovered the wonders of language across the curriculum. It was an exciting discovery. "Every teacher an English teacher" was our catch-cry, and we showed how communication and language skills could be, should be, and would be taught through every possible subject in the curriculum. Books were published; conferences flourished; academic reputations were made. I was at an international conference of English teachers, listening with fellow converts to a paper on language across the curriculum. In the discussion, someone said, "I'm a primary teacher, and we discovered integrated language skills programmes years ago. They've even started going out of fashion now. Why is secondary education so far behind?"

I have a niggling worry about my present involvement in integrated skills courses at university. It is that, very soon, in a conference just like this, a secondary

teacher will stand up and say those same words. And, in twenty years' time, shall we be looking back at the nineties and saying, "Oh, integrated programmes were all the rage then; we do things differently now"?

These, then, are my stories, my doubts, and all but one of my questions. I have no doubts about the way in which these programmes we've been shown here are designed. On the contrary, I wish I'd thought of them myself. They are the result of tremendously hard, collaborative and imaginative work by many people throughout the institutions concerned. But there are questions needing to be continually asked - and answered.

Integrated courses draw on reserves of goodwill, skill, dedication, energy, and usually money, and this reminds me of one more question, with which I shall finish. In the scramble to fill quotas and ensure funding, our universities are admitting students with ever lower entry scores. It is because of these students, in the main, that there has been so much emphasis on developing communication skills courses in recent years. To be sure, we know from studies that there is no direct correlation between entry scores and success at university. We also, nonetheless, know from experience that those with low scores are more likely to be unmotivated to learn, more likely to be unsure why they are at university at all. They are less likely to bring to their studies the critical mass of background knowledge and understanding that is essential in a good university education.

Those of us who advocate integrated skills courses have to make a decision, one based partly on economics, but, more importantly, on ethics. At what point should we tell our university administrators that it is both uneconomical and unethical to admit students whose chances of passing are remote, and then to devote enormous efforts to trying to help them to pass? Is there a point at which it is proper to allow a form of natural attrition to occur? When do we say that these wonderful programmes, of the sort we've had demonstrated to us here, are simply not justifiable?

Or will that time never come?

Which Thesis Did You Read?

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We have observed over the past twelve months an increasing tendency for examiner's reports on higher degree theses to award radically different and often incompatible results to the same thesis. The problem is not entirely new but it does seem to be becoming more frequent. In this paper we will attempt to make sense of some of the reasons for these incompatible readings, making reference to the examination of theses in at least two disciplines and at different universities. We will suggest the need for more task specific criteria and a better theorised postgraduate pedagogy.

Our paper emerges from the increasing concern we have both had with the large numbers of contested PhD results we seem to be seeing, with the unhappy supervisory relationships we see around us, and with the damaged people we see emerging from these relationships.

We want to begin by saying very firmly at the outset that neither of us believe PhD Supervision is or should be a soap-opera. But by the time we have finished, we hope our use of that metaphor in this paper will prompt you to think about aspects of the process of postgraduate supervision, thesis writing and examination that you may not have been thinking about. In fact, we think it's very easy not to think about the problematic aspects of PhD examination when these processes are obfuscated, as they are, by contradictory bureaucratic, commodity, quality and Oxbridge derived discourses about what these processes are or should be.

In preparing this paper, we have had access to a large number of paired conflicting examiner's reports, from a wide range of disciplines in the Humanities - English, Cultural Studies, Women's Studies, Education, Sociology and Anthropology - and from a wide range of tertiary institutions in Australia. Because issues of confidentiality and ethics make it difficult to use such materials directly, we have, in what follows, constructed our examples and our stories. We have modelled the grammar, genre and rhetoric of the originals, and we have used a collocation of actual stories to make the supervision and examination story we will perform for you later in the paper (complete with music). We can only promise you that the real stories we have been told and have documented are every bit as convoluted and difficult as the one we have written for your benefit.

Our concern here is not with the student's literacy problems - although many papers could be written around that. Such papers would have to explore the

55.

demographic changes in recent years of the postgraduate population in Australian universities, the fact that class, race and gender are now issues in that space, as are the much larger numbers of women students, interdisciplinarity, and the vulnerability of overworked and underpaid staff both as supervisors and as examiners. Our concern, rather, is with our literacy - with policy that never addresses the right issues - with all the things we no longer know or know only imperfectly given all these changes. We want to make the following points at the outset of this paper:

1. Doctoral supervision and examination is pedagogy, it is a process of teaching and learning.
2. We actually have no postgraduate pedagogy - what we have is the inheritance from a colonial past - the British Oxbridge system of the research doctorate, and many staff whose only training to do supervision and examination comes from their own experience of supervision and examination within that system.
3. Our commitment to confidentiality and 'objectivity' in the PhD examination process needs to be rethought in more complex ways which call into question traditional models of postgraduate supervision.

CONFLICTING EXAMINER'S REPORTS

To explore in greater depth the issue of PhD examination, we present two conflicting examiners reports which prompted us to ask the question: Which thesis did you read? As you read excerpts from these reports you must keep in mind that Examiner A and Examiner B actually read the same thesis.

Examiner A

It is rare to be invited to examine a thesis which proves pleasurable as well interesting to read, but Ms. X's work prompted both responses. It is very impressive and shows an immensely thorough knowledge of the texts under discussion, while drawing on a widely varied range of scholarly background material in support of its arguments.

One of the great strengths of this thesis is the way Ms. X examines this apparent discrepancy by exploring the writer's stratagems for asserting her role as a writer in a phallocentric society.

The entire thesis, however, is full of illuminating insights.

The observation on page x that y is a characteristic of all textual examples is a good one, but I think it is also interesting to consider other contrary examples.

There are one or two other points which could perhaps be qualified a little.

The point made on page x of the thesis is very interesting and in most cases accurate.

Ms. X's discussions of B's debt to C's theory is important and useful.

Ms. X has succeeded admirably in the task she has undertaken. I strongly commend her thesis and hope very much she will publish her findings either in the form of a book or of journal articles.

Examiner B

As I cannot give a positive reply to any of the questions listed under (1) on this form, I believe I have no choice but to recommend that the candidate be not awarded this degree. This is the first time I have ever made such a recommendation - I am not prepared, however, to see the thesis awarded a masters degree, nor do I believe that any amount of revision would improve the thesis.

This is a harsh judgment and I have not made it lightly.

The candidate's tendency to assume and generalise, rather than question and analyse, is apparent throughout the thesis.

Ms. X uses both her primary and secondary material in too unquestioning and uncritical a way.

She constructs her arguments on limited evidence and so is led into over-general and often incorrect conclusions.

Her own theoretical position appears to be a very naive and essentialist one.

I have several pages of detailed notes but I do not believe this thesis can be revised. I am therefore not going to waste any further time writing these out. There is nothing here fit for publication and no evidence of original or independent thought. There is one sentence on nearly every page that is incomprehensible and the candidate's English expression is poor.

To tease out the differences in these discrepant reports of the same thesis, we can highlight and contrast the use of lexis and modality in the two texts as follows:

Lexical Analysis of Examiner Reports

Examiner A	**Examiner B**
rare	unquestioning
pleasurable	uncritical
interesting to read	limited evidence
impressive	over-general
immensely thorough	often incorrect conclusions
knowledge	very naive
widely varied range	essentialist
scholarly	nothing fit for publication
great strengths	no evidence of original or independent thought
illuminating insights	incomprehensible
important and useful	poor English expression

Modality/Polarity Analysis of Examiner Reports

Examiner A	**Examiner B**
a good one	cannot give
but also interesting to consider other	no choice
could perhaps be qualified a little	not awarded
in most cases accurate	no amount of revision
	have not made
	do not believe
	not going to waste any further time

Both analyses reveal the construction of sets of oppositional terms. While Examiner A's report is generous with positive evaluative terms (e.g. *pleasurable, interesting, illuminating*) Examiner B's report abounds in negative judgments (e.g. *unquestioning, uncritical, incomprehensible*). When Examiner A wishes to make critical remarks, the language used is modalised (e.g. *perhaps, a little*) and carefully qualified (e.g. *a good one but, in most cases*). Examiner B, by contrast, qualifies nothing and the assertion of student failure is justified and constructed through the repetitive use of negative polarity (*no* and *not).*

While such an extremely oppositional reading of a student thesis is rare, conflicting examiner reports are relatively common (Ballard 1995). Consider the figures taken from the record of one meeting of one university's PhD & Scholarship Committee, which meets every six weeks:

PhD & Scholarship Committee Meeting Report

# PhD's satisfactorily completed	17
# PhD's awaiting action arising out of examiner's reports	40
Minor Amendments	16
*Major amendments	1
*Revise and Resubmit	13
*Amendments to satisfaction of dissenting examiner	7
Amendments to satisfaction of head of department	1
Awaiting adjudicator's report	2

* These three categories are the institutional names for the phenomenon of conflicting examiner's reports--a phenomenon which is not explicitly named.

These figures suggest at the very least that PhD Examination is a contested process and that examination itself is becoming part of the pedagogic process. While universities are beginning themselves to research this phenomenon (e.g. Monash Statistical Report 1993-1995), there is still little useful data available, although it is clear that the effort involved in getting a student through is long and involved and does not simply end when the thesis is submitted. If examiners are now also playing a part in teaching students how to produce a satisfactory thesis, the labour involved needs to be taken more seriously (more so than the $200 - 240 examiners are paid for what is often a week's work to complete an examination).

We can certainly hypothesise some possible explanations for this increase in contested readings and subsequent revision activity-reasons which are multiple and overlapping rather than simple cause-effect relations. One of these is the increase in numbers of students now enrolled in PhD programs. Leder (1996:5) argues that:

> the proportion of Australians completing secondary school and the demands for tertiary places, both undergraduate and postgraduate, have increased dramatically. For example, the number of students enrolled in PhD studies increased from 7,035 in 1983 (Castles 1990) to 13,623 in 1992 (Castles 1995). The rise has been particularly striking for women. Their enrolment almost tripled over that period: from 1,897 in 1990 to 5,123 in 1992 (compared with 5,138 and 8,500 for males in 1983 and 1992 respectively).

Clearly the larger numbers of women in the academy construct a new set of unexplored gender issues (see for example Monash Postgraduate Association Equity Project, 1996; Australian Institute for Women's Research and Policy Report, 1995). The increase in numbers more generally produces a more diverse and variable population in terms of ability and raises new problems in relation to being positioned within white Anglo-Celtic elite culture and the implicit understandings of PhD elite culture. These in turn may contribute to an increase in contested examinations, as might the breakdown of clear distinctions between disciplinary fields and the impetus, for example, to border crossing in the humanities and education as well as to increasing numbers of students negotiating interdisciplinary work rather than locating their work more neatly within single paradigms to which traditional examiners may be accustomed.

Given that PhD candidature has become more frequent and a requirement of an increasingly diverse range of professions, Yeatman (1995:9) argues that traditional patterns of PhD supervision (and we would add examination) can no longer work.

> It is simply inadequate to the demands of a situation where many supervisors are barely socialised into the demands and rigours of an academic scholarly and research culture. It is especially inadequate to the needs of many new PhD aspirants who, by historical-cultural positioning, have not been invited to imagine themselves as subjects of

> *genius*. These include all those who are marginalised by the dominant academic scholarly culture: women, and men or women who come from non-dominant class, ethnic or race positions. When PhD candidature was infrequent, the rare ones of these could distinguish themselves as an exception to the rule of their particular gender, class, ethnic or class category, and show that by their highly exceptional qualities, they deserved to be admitted as a disciple...Now, however, there is a high proportion of PhD candidates who do not fit the old mould, and whose numbers belie any exceptionalist approach.

In such a context, it surprises us that the rhetorical demands of PhD production continue to be ignored. In most other contexts of education, it is commonly acknowledged that assessment shapes curriculum and needs to be regarded as part of pedagogy. Not so in PhD work, it appears, where the selection of examiners, for example, is often not addressed until the latter stages of thesis production. Thinking about who the examiners are, will/must shape the thesis and a variety of questions related to its production, including what are the interdisciplines it will cross and what tendacious issues it might address and how. Failure to consider such issues seriously may relate to what we perceive as an increase in discrepant examiners reports and to a more general failure in the academic community to regard doctoral supervision and examination as pedagogy - as interrelated processes of teaching and learning.

POSTGRADUATE PEDAGOGY: BEYOND MARKETIZATION AND OEDIPAL DISCOURSES

In so far as the question of postgraduate pedagogy has been addressed at all in Australian universities, it has been addressed in terms of contractual obligations between supervisor and supervisee (and by implication between those two parties and the university as institution), and in terms of an increased panopticism. This manifests itself as the need to discipline (control) the student's labours in order to categorise and improve levels of research output - so many words in such and such a genre in six months, so many more in twelve - and so on.

There have been similar moves to quantify, categorise and give economic value to the kinds of staff time and energy that might be devoted to the project of supervision - appointments every three weeks of an hour or more, the need for academic staff loads to take account of this, the need again to behave in ways which increase student output or perhaps 'throughput'. That is, the need to keep them moving on the assembly line of knowledge production, because there are others waiting, and because successful throughput means money for the institution. Postgraduate students are worth more in EFTSU dollars than undergraduates and that matters as undergraduate loads are reduced by the technology of DEET and government intervention into higher education; but it matters only for the period allocated normatively for the successful completion of higher degree (e.g. 3 years full-time study, 5 years part-time). After that the EFTSU dollar is lost and so is the economic value of that postgraduate student.

This kind of quality-speak, this 'commodification' and 'marketization' of public discourse as Fairclough called it in 1993, has been typical of the post-Dawkins era in Australian higher education. It has been both 'productive', in Foucault's or Hunter's (1994) sense of producing the things of which it speaks - greater surveillance and control and a recognition of the need to think seriously about what postgraduate pedagogy is or should be - and at the same time amazingly negligent. What it neglects includes many things of importance: the fact that postgraduate supervision and research is part of a process of the making, not just the transmission of knowledge; the fact that that knowledge has both symbolic and cultural as well as economic value (to use Bourdieu's (1991) formation; the fact that any making of knowledge that goes on involves people, people who have bodies, sexed bodies, and that that process is never free of desire, power nor of class, race and gender struggles and inequalities. And even all of this does not yet address the question of just how 'professional vision' (Goodwin 1994) and disciplinary knowledges are actually to be taught, or contested, in these fraught, collaborative and sometimes hostile encounters.

Knowledge cannot be produced without the making of texts and texts always carry the marks, the traces of the labouring subjects who produce them. That labour involves 'work on and with signs, a collaborative (even if hostile) labour of reading and writing' (Grosz 1995:20). This feminist and semiotic formulation is one that should be central to our attempts to understand what we do when we engage in a postgraduate pedagogy. Feminist psychoanalysis has been challenging for a long time now the public face of the 'marketization' discourse, insisting that relations which that discourse would relegate to the private sphere (the somewhere else of domestic or feminised space) actually permeate our educational and indeed governmental institutions as well; insisting that a feminist (or indeed any) pedagogy cannot ignore the sexuality, the unconscious desires, the will to power and the making of the relations of ruling (Smith 1990) and thus of the relations of sexual, class and racial difference, that are made on a daily basis in these very public spaces. What the marketization discourse never allows to be spoken is the fact - not the imaginary but the fact - of these differences in supervisory relations.

Some time ago John Frow (1988) bravely attempted to put some of these issues on the agenda, only to be challenged some time later by Giblett (1992), his PhD student, for the things he had not said, had not managed to move beyond. His failure is itself instructive. What Frow attempted to do was to construct a transference model of postgraduate pedagogy. Giblett (1992) challenged the blindness to gender in Frow's construction, pointing out that he had effectively gendered the supervisory role masculine, assuming that 'erotic' questions (of relations with male students, sexual harassment and so on) would be a problem for female supervisors occupying that 'masculine' role, but never addressing the question of his own sexuality in relation to male and female students.

Giblett's critique was based in the fact that Frow had maintained a transmission model (from male knower to male apprentice) of pedagogy, ignoring the possibility of a counter-transference situation in which the student would know

'that s/he knows but also for the analyst/supervisor to know that s/he does not know' (1992:139). Frow set out to use psychoanalysis to make a radical intervention into questions of postgraduate pedagogy but actually allowed himself to be positioned by an Oedipal scenario which reduced his story of the supervisory relationship to one of the 'oppressive rituals of the patriarchal family' (Gilbert 1992:144). This failure is instructive because of what it tells us about the persistence of that Oedipal narrative as a way of life in Australian universities. In 1993, the Gallop Seminar at ANU tried to address these questions. Lee and Green (1995) have recently published another interesting paper which is beginning to explore the whole issue of postgraduate pedagogy from very different perspectives.

In some ways, the attempt to open up these issues for discussion in the Gallop Seminar Papers founders around the same set of questions: the ubiquity of the Freudian family narrative as both the reality of institutional existence and the only alternative discourse we have for interrogating these relationships - the only major theoretical discourse which gives woman any place at all, even if it is still a place in *his* story. We wish to ask, is there no other position for women in higher education to occupy than that of the desexualised mother or the dangerous seductress? And what of relations between women in those public spaces? How do we theorise and deal with that? On the one hand, as Jessica Benjamin, among others, has argued convincingly (1990:185): 'The social separation of public and private spheres ...is patently linked to the split between the father of autonomy and the mother of dependency.' John Frow is caught up still in that problematic. On the other hand, there is the question of a different model of the mother and of mother-daughter relationships, of different kinds of performances of the relations of ruling among women in the academy:

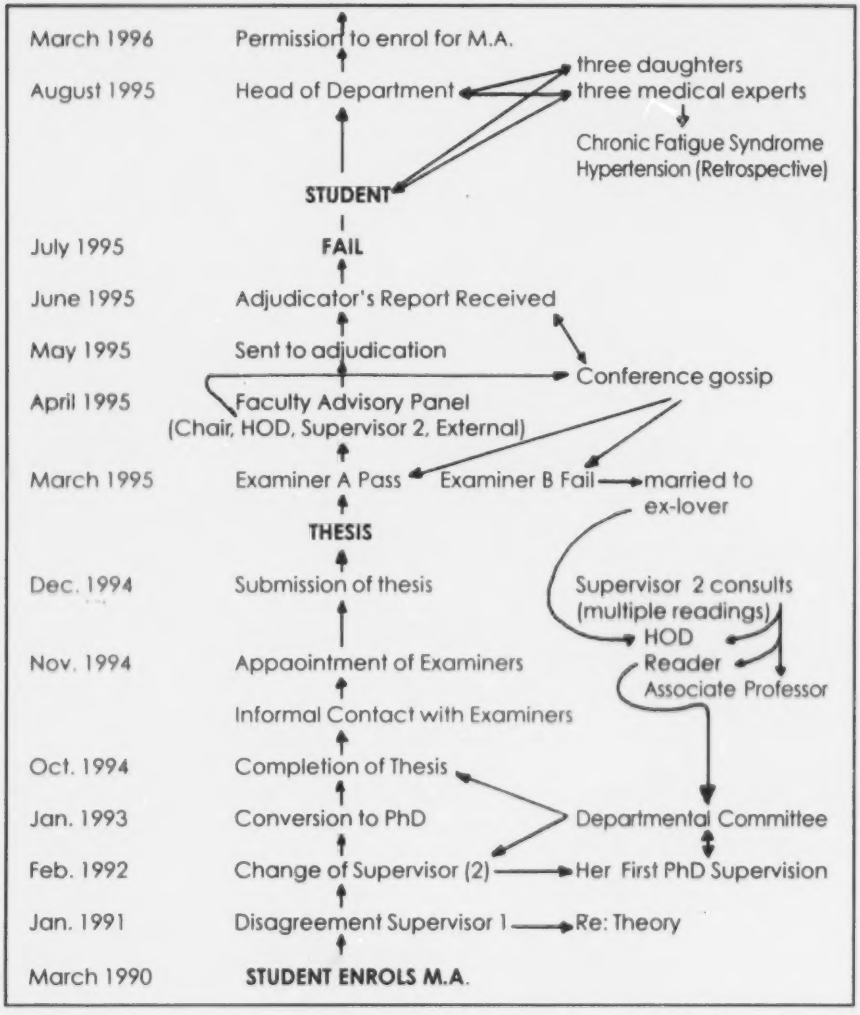
> What if your mother refuses her gaze, turns her attention elsewhere? Does not serve as your mirror, your nurturance, your ground of continuity of being or of the semiotic, fertile source of aesthetic meaning ungoverned by the Father's Law? If she is no longer outside, but inside, power? If she wields power not as care, nurturance, preservative love, but as assertion, need, desire of her own? Or if she is off playing, with other women or men? Or in her own head? Can daughters (or your sons) stand to be cut off, outside the dyadic circuit? (Flax 1993:67) (our underlining)

These are good questions, questions that are central to the dynamics of current postgraduate pedagogy in Australian universities, and questions that the essays written for the Gallop Seminar addressed, perhaps without resolutions, but at least in public and as a matter of institutional concern.

A story of institutional failure

Of course, our failure to theorise postgraduate pedagogy has material effects on the lives and bodies of the students we supervise and examine. We can illustrate this by returning to the conflicting examiner reports with which we began our paper and bringing to center stage the student whose thesis was assessed by

Examiners A and B. As a consequence of the discrepant readings, a third examiner was selected to adjudicate the dispute and ultimately Examiner B's reading was confirmed and the student was failed. There are many ways, however, to tell the story of her failure. First, we tell it from the point of view of the institution, by outlining the set of institutional relations and procedures involved. These are represented in the diagram below as a linear process with a chronology and a set of institutional practices that mediate and construct an institutional history.



This diagram can be read by moving chronologically and vertically from bottom to top. You will note, however, there is a great deal of activity clustered on the right side of the diagram. These represent traces of the many interpersonal interactions and domestic difficulties, crises of confidence for supervisors, and attempts at counselling (supervisors, students, distressed examiners) that are never recorded in the institutional history.

Because this representation does nothing to illuminate the nature of supervision and failed examination as everyday lived experience, we wish to tell a different story which does not begin and end with examination (supposedly the end point of a long process) and which illustrates what poststructuralist themes of textuality have been about for a long time, including the embodied subject and the power of authority and its violence. While the academy may treat supervision and examination acts as disembodied processes, the micro-context of relationships are never separate from the macro politics and relations of power. Positionings as student, examiner, and supervisor are never separate from gender relations, power, knowledge, authority and the histories of the individuals playing out the game (Ballard 1995).

For issues of ethics and confidentiality, we tell this story again by using many different cases to construct a soap opera - a perfect metaphor with its generic conventions of drama, pain, betrayal, and love lost.

PHD EXAMINATION AS SOAP OPERA

Any resemblance to real persons or historical events in what follows is purely accidental. We have tried to keep the sexualities ambiguous. Any participant could be gendered in many ways.

> A conference is held in a relatively small field in the Northern Territory. Examiner B from Panash University announces to the company at large over dinner that she has just failed the most appalling thesis she has ever read from Pazzazz University. What she doesn't know is that Examiner A and the person adjudicating that result, known heretofore as the Adjudicator, is sitting opposite her at the table.
>
> Examiner B has a great deal of power in the field in which these people work; she influences jobs and reputations. How can we explain such a breach of confidentiality? What is at stake for Examiner B in making such a public statement? What might the effect be on Examiner A (who has just passed and commended the thesis as 'impressive' 'pleasurable' and 'interesting'). Will this gossip have any affect on the Adjudicator's reading of the Examiner's Reports and the dreadful thesis?
>
> **Probably not, if the examination process is objective and confidential.**
> **And Brutus is an honourable man.**
>
> Five years earlier, the Supervisor of this dreadful thesis was supervised by Examiner B. Thirty years earlier the Supervisor's HOD and

Examiner B for a brief time shared a lover. What (we wonder) are we to make of the fact that all that time long time ago, when the HOD realised that this lover was not to be the love of her life and ended the relationship, the lover returned to Examiner B and they were subsequently married.

We wonder how such distant events may motivate the readings of a student's thesis and the statement made over dinner. Does it matter that Examiner B and the HOD worked together as graduate students thirty years earlier, shared a lover and are now competitors in their field at rival institutions? We wonder if there is anything at stake in Examiner B from Panash University claiming that Pazzazz University (where the HOD is located) has produced the worst thesis she has ever read. Does it matter that this happens in an era when institutions have become increasingly competitive and funding arrangements have set universities against one another in the marketplace?

Probably not, if the examination process is objective and confidential.
And Brutus is an honourable man.

Well, what has become of the student? The student is 53. She's been writing this thesis for 7 years. She has three daughters, all professional women. During the course of her supervision with the first time Supervisor, the student suffered recurrent bouts of depression and had difficulties with contemporary theoretical frameworks in her field. How does a first time supervisor deal with all of this? These are pedagogic and emotional issues. Do they have anything to do with the final examination process?

Probably not, if the examination process is objective and confidential.
And Brutus is an honourable man.

When the thesis is finally complete the young Supervisor wants confirmation that it is actually ready to go out for examination. It is read by her HOD, a Reader and an Associate Professor in her Department. All three confirm that they would see this as a passable Doctorate Thesis. There is consultation about examiners, examiners are contacted informally and then appointed.

Examiner A passes the thesis. Examiner B fails the thesis. Examiner A is now very distressed when he is informed by Pazzazz University that Examiner B failed the student. What does this say about his own judgment and glowing report? He writes twice to the University asking to see Examiner B's report but is denied access. Ultimately, the Adjudicator comes down in favour of Examiner's B judgment that the thesis should be failed.

Remember the dinner at the conference? Remember the love affair? Remember the rivalry? Remember the power relations in the field? Do any of these things matter now?

Probably not, if the examination process is objective and confidential.
And Brutus is an honourable man.

What has become of the student now? Remember her three daughters? In a tearful interview with the HOD, she confesses that she cannot tell her daughters that she has failed. She also produces three medical certificates from three medical different experts now suggesting she is suffering from Chronic fatigue syndrome and hypertension. She asks for retrospective consideration. Can she have it? Should any of this be taken into consideration? A series of University committees decides NOT.

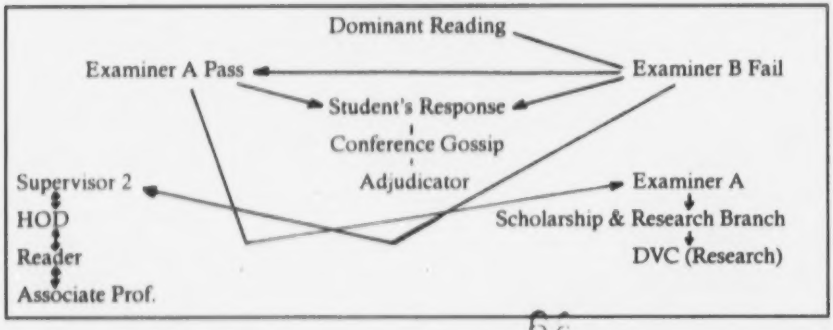
One year later the Student reenrols for a Masters Research Thesis. A third Supervisor is appointed. And the story continues.

READING FORMATIONS

Cultural studies and recent work on readership has taught us to see the reader as empowered, a nomad, a textual poacher (de Certeau 1984). In fact, the story we've just told seems to us to demonstrate that within the academy there are enormous constraints on readers. We are not the nomads we are made out to be. Dorothy Smith's (1990) work on organisational discourses has demonstrated in a sociological context the way in which discursive conflict of any kind produces problematic readings always related to hierarchical power relationships. What she has demonstrated is the power of dominant readings to inflect all those which have less power than it. A dominant reader quite simply counts more than other readers. That power is granted to a dominant reader, in the case of PhD examination, by our institutionalised belief in objectivity and confidentiality.

In the diagram below, we represent the reading formation (Bennett 1993) that we see as having governed the outcome for the student, whose story we have just told you. In this case, as we have constituted it, the 'Dominant Reading' is the reading of the thesis produced by Examiner B, who was the most powerful of the people involved in this complicated scenario.

Reading Formation



What is important here is that there is a sequence of readings involved and that sequence has powerful effects. Examiner B's reading calls into question the reading of a more junior colleague in the same field, Examiner A. The Adjudicator, who was appointed to decide between the two examiners and is inevitably situated in the same field, is also more junior than Examiner B and has been a party to the conference gossip where Examiner B gave a 'public reading' of her reading of the thesis. Both Examiner A and Examiner B's reports on the thesis inflect the response which the student is entitled to make to their reports for the Adjudicator.

In the story we are constructing, Supervisor 2 (the supervisor who took over when this candidate upgraded to PhD) is a former student of Examiner. Supervisor 2's reading, then, is also now called into question. (Remember she had to approve the thesis before it could go out for examination). However, Supervisor 2 did not read alone. She had concerns about the thesis because it was her first PhD supervision and she asked her Head of Department, a Reader and an Associate Professor in her department to read the thesis before it was sent out to examiners. All agreed that they would pass the thesis, but now their readings have also become suspect.

The Adjudicator who has to decide the case is already faced with a number of conflicting readings: Examiner B's report, Examiner A's report, the Student's read response to those reports and the Adjudicator's prior relationships to Supervisor 2 (a colleague) and the Head of Department (also a colleague). Despite this, she comes down in the favour of the reading of Examiner B and fails the thesis. We remind you that Examiner B is very powerful in the field in which the Adjudicator works.

Meanwhile, Examiner A, determined to vindicate her reading, writes to the Scholarship and Research branch at the University demanding to see the other Examiner's report. This request is passed on to a Deputy Vice Chancellor who refuses this request on the grounds of confidentiality.

What we are trying to demonstrate, then, is the role of reading formations in understanding the impossibility of an 'objective' or 'confidential' reading in the kind of scenario we are presenting - a scenario which is more common than any of us would like to believe.

CRITERIA AND EXAMINATION

The difficulties we have discussed in this paper have a great deal to do with the current absence of any real postgraduate pedagogy (Lee & Green 1995). Contrary to some popular opinion, supervision is more than 'talking in the office' and examination is more than objectively reading against predetermined criteria. The criteria for a successful doctorate thesis, as currently set out in instructions to examiners' documentation from most Australian universities, give examiners a small number of alternatives. They may pass the thesis, ask for minor amendments, ask for major revisions or they may fail the thesis. The grounds on which they are to make these decisions are flimsy at best. They are asked, for

example, to decide whether the thesis is original /independent work - a peculiar concept at best in a poststructuralist context and one that harks back to a British masculinist transmission model of the creative individual as independent scholar.

Nowhere does anyone attempt to define what originality might mean now in the kinds of contexts we have discussed above. Noone seems to have noticed that it is no longer British boys who are writing doctoral theses, that there are many more doctoral students then there used to be, and that originality in this context is highly unlikely and independence improbable, given the close dyadic, one-on-one supervisor relationships we now work with. Independence is also unlikely if the degree is to be completed quickly and efficiently, in line with the current quality and economic arguments shaping university cultures.

Both concepts (independence and originality) are actually contradictory with and detrimental to the idea that the supervision and examination process is a teaching and learning process. We suggest that a 'coproductive relationship' of the kind suggested by Alison Lee (1996) offers a much better model for theorising what supervision might be about than anything currently available. The other criteria which is always inevitably mentioned to guide examiners is publishability. That too seems to us an extremely problematic criteria given publishers' attitudes towards the publication of PhD theses. They usually run a mile. If we really want to teach students to write in ways that are publishable, the typical 80,000 word thesis is not the way to begin.

We note some recent attempts by universities to do a rather better job with setting out criteria, although to date we have come across these only at Masters and Honours level, not at PhD level. The criteria, for example, which Murdoch University currently uses for its examination of its Masters in Literature and Communication examination seems to us to be particularly helpful:

> ...Examiners should take into account the specific methodology, theory or paradigm of research in which the student is working - and the student should be judged on those grounds. That is, examiners should not find fault with the approach which the student takes to the topic, but should examine the dissertation in terms of whether or not (and to what degree) it is a competent application of that particular approach.

Criteria:

1. *Subject Content*
   - adequacy of the candidate's conceptual understanding of the approach to the topic and the topic itself;
   - evidence of a thorough, critical and discriminatory review of previous material in the relevant filed of inquiry.
2. *Competence in research*

- execution of the project and analysis of the results;
- interpretation and discussion of findings.

3. *Presentation and quality of the dissertation*

- organisation of the text;
- layout
- clarity of style (including spelling, grammar and syntax);
- correctness of referencing techniques

These criteria seem to us to be a move in the right direction, particularly in an interdisciplinary context, because of the way they focus on what the student has actually set out to do, rather than what the examiner might have liked the student to do. They are also quite specific about the ways in which things like subject content, competency in research and presentation are actually to be assessed and provide a model for more useful ways of giving direction to examiners.

At the moment such specificity, as is available institutionally, is not much help. In the case of all the institutions we examined, there was a vast amount of information for both students and examiners about how the binding, presentation, width of margins, commas should be organised, but little real guidance for the student or examiner on the content and form of the thesis. While we recognise the problems about specificity with regard to the PhD, which is usually a university degree and therefore not faculty specific, we nonetheless feel we have institutionally resorted to using a great deal of paper to talk about what can be measured, and avoided the more difficult issues. The focus is all on the technical production of the thesis as artefact, as commodity, not the business of its making, the fields it might engage with or the ways in which those engagements might be examined and assessed.

Even if we get the criteria right, however, examiners 'will still need to be examined' (Shannon 1995:14). That is, we first need to theorise the examination process itself and then give people some training in what it is precisely they are expected to do as an examiner of a PhD. It is one thing to argue, as Ballard (1995) does, that we are currently generously admitting a number of scholars to the fields in which we work through the process of examination. It is quite another to actually do this in a deliberate, knowledgeable and focused way that does not damage students in the ways we currently do. We have not mentioned what happened when we delivered a version of this paper at the Tertiary Literacy Conference in Melbourne in March 1996. Immediately after the paper, we were mobbed by people who either still were or had been postgraduate students eager to tell us of the horrors that had befallen them in that situation. In subsequent weeks, we received a number of lengthy and equally disturbing narratives in the

mail. This is by no means a rare phenomena. And that is why we have told our constructed story as a soap opera which is equally ubiquitous.

In conclusion, we have some questions to ask:

- Why not course work if we believe it is teaching and learning we are engaged in?
- Why not teach students how to write alternate things - papers and genres of publishable length?
- Why not choose the best person for the job of examination - inside or outside the institution where the thesis is written - rather than assume an 'outside reading' ensures an unbiased, fair, objective examination?
- Why not an oral defence of a doctoral thesis which would at least make examiners and supervisors accountable to the other whom they are 'examining'?
- Why not more dialogue, more negotiation among students, supervisors and examiners and less committees, less rules and prohibitions about confidentiality and objectivity? (remember Foucault's repressive hypothesis - repression is merely reproductive of all the things it attempts to deny)

If we can't avoid the personal, the complexities of human relationships (and who would want to), why not acknowledge them and use them as a resource to make the process of PhD supervision and examination less damaging, less threatening and more realistic and pleasurable for all concerned. Why not teach students to engage in co-productive relationships (Lee 1996) where they engage in thinking, theory and reflective doing, making their academic theories impact on practice in significant ways. That is what they will need to do, after all, in the communities they go to when they leave the academy and we are not convinced that our current system is conducive to producing these 'outcomes'.

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The Complexities of Tertiary Literacy

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Given significant changes in the composition of their feeder societies, Universities have had to make extensive changes to both their entrance formats and their expectations of student functions within courses. Some of these changes have enjoyed high profile exposure, eg. multiculturalism, technology and gender equality, and have consequently had their associated coping strategies (ie. their 'literacies') formalised in such documents as the Mayer and Finn Reports. This paper seeks to contrast such ability expectations with the subtler but nonetheless significant abilities that are assumed to be natural corrolorics of high profile changes but which fail to attract formal recognition. For instance, the generic ability to deal with change, as opposed to dealing with individual changes, is presupposed but is clearly not limitless, as witnessed by students being successful in undergraduate areas but failing in graduate contexts. The types of literacy expected in courses where conforming processes are rewarded is contrasted with that seen as necessary for areas involving a "problem solving" approach, and some of the contributory abilities needed for success are analysed and delineated. In tertiary institutions, the changes affect both staff and students and data will be presented to illustrate aspects of both areas.

Over the last decade or so, not only has our society undergone radical changes; we can immediately think of such aspects as computerisation, multicuralism, gender equality, technological advances and our shrinking global village, just to name a few; but the position and the role of tertiary institutions within that society have also experienced extensive changes. In Australia, we have gone from a three tiered structure to two, participation rates have increased enormously, overseas student access has exploded and funding procedures have changed significantly, much greater emphasis now being placed on private sector contributions and to universities making their own commercial way in the world, rather than being almost entirely provided for by government.

These changes have had to be dealt with by the adoption of sets of "coping strategies", which should fit comfortably within current views of critical literacies, given that our view of literacy encompasses the ability to deal with changing environmental demands, including those related to language and communication. However, considerable difficulties have arisen in various aspects of the implementation of these coping strategies, due largely to misunderstandings of the role of the strategies and of some of the implications of otherwise well meant initiatives.

Significant sections of change for tertiary institutions have been attributed to the policies implemented by the former Federal Minister for Education, John Dawkins. In his introduction to the 1991 national policy document Australia's Language: the Australian Language and Literacy Policy, Mr Dawkins stated that:

> Global economic forces are demanding changes in the structure of Australian Industry, in our ability to compete in world markets, and in our readiness to adapt to new jobs, new career structures and new technologies. These changes will require new skills in communication, understanding and cultural awareness, in the workplace as much as in the international marketplace. They will also place added pressure on our education and training systems. (Dawkins, 1991, p.iv.)

Most of us who have been involved in these changes can attest to the minister's powers of understatement.

As a result of the policy responses to these global forces, Simon Marginson observed in 1993 that "Education is becoming a marketed economic commodity (or rather a number of different commodities), especially in post-school institutions" (Marginson, 1993, p.172). But he then went on to point out that the "OECD notes that 'there can be little doubt that the ways in which higher education institutions receive funds affect their incentive, and hence influence their internal organisational behaviour and the composition of the academic services they provide'" (OECD, 1990, in Marginson, 1993, P.179) He further labours the point by highlighting some of the almost incredible figures of income earned by tertiary institutes from overseas marketing:

> $100 million in 1988 and $174 million in 1989. Revenue generated by English language courses reached $58 million by 1989. In 1990-91, full-fee programs between them generated $392 million in the sale of educational services and another $270 million in the sale of other goods and services to full-fee students. By 1991, six higher education institutions were listed among Australia's top 500 exporters. In 1992, Monash University was earning $40 million dollars a year from international students, representing 12.5% of its budget. (Marginson, 1993, P.187).

The enormity and speed of this stimulus for change then may offer some indication of the reasons for the difficulties of implementation.

Because the stimulus for change has been seen as being global in nature, the search for coping strategies has also been global, and Australia's current investigations into the Outcomes and Profiles template for schooling emanate partially from Great Britain's efforts to introduce a National Curriculum as a result of the U.K. Educational Reform Act of 1988. A similar process has occurred in New Zealand with the introduction of the Achievement Initiatives, particularly that in English Language, and Angela Scarino has recently commented on similar activities in America, both between co-operating states and, in particular, in California (Scarino, 1995). However, none of these innovatory procedures have run smoothly (some may consider that to be an understatement, as well). Major concerns have arisen

over day by day aspects such as workload, assessment procedures and the complexities of some of the categorisations involved. The emphasis on such observables as performance indicators has caused their role to be disproportionately elevated; Scarino suggests that "There is a danger that the outcomes will be accorded ontological status" (Scarino, 1995, p.10) and certainly it is very easy for such tangible and identifiable behaviours to come to represent entirely the intangibles of cognition, development and ethical principle.

However, Outcomes Based Education (OBE) appears to have considerable appeal for commercial interests in our community since it attempts to delineate specific abilities of a prospective employee rather than offering an averaged scaled number. In 1995, the Hunter Valley Research Foundation conducted a survey of Newcastle area businesses, inquiring about the suitability of university graduates to fit readily into the workforce. One of the major criticisms was a deficiency of literacy skills, which those surveyed indicated should be overcome by university lecturers being more punitive of "errors" in submitted assignments. This recommendation has had little effect on lecturers at our university who are under the firm belief, supported by research investigations, that such red-pen penalty procedures have little effect on students' literacy performances. Already we can see a tension here that is central to the process of change. Although tertiary institutes in general are trying hard to serve their communities (admittedly often with ulterior financial motives in mind) it can readily be seen that the server and the servee are starting from different viewpoints on how literacy can be achieved.

OBE also makes some claims to having educational value in that it has "the perceived potential to minimise the notion of failure (McGhan, 1994) and a focus on learning accomplished rather than on time spent to achieve learning success (Haas, 1992)" (Eltis, 1995, p. 20). Certainly, the Federal Government has indicated its faith in the process; in January 1993, the then Minister, Mr. Beazley announced the provision of $20 million over the next three years to support the development, trialing and evaluation of the Mayer Committee key competencies in Australia's general and vocational education and training systems. A letter to Universities from DEET on 22 December, 1995, stated that "Work is proceeding to develop all the key competencies as explicit learning outcomes. ... It is reasonable to assume that key competencies will be implemented nationally in some form."

This result has horrified large numbers of academics who had thought that such an explicitly OBE approach had been shelved because of the British, New Zealand and American difficulties, and because of the extensive discussion that had taken place in relation to the Mayer recommendations during 1992. These discussions highlighted such objections to OBE as:

- the preference for a 'rational' approach to education as opposed to procedural and critical alternatives. (see Smith & Lovat, 1991 for a discussion of procedural approaches.) Ellerton and Clements (1994) have argued strongly that the performance indicators even of maths tests are not universally representative of supposed cognitive processes.
- the danger of reverting to an assessment based education, with the consequent

de-emphasising of educational processes.

- the risks of partitioning knowledge into a set number of categories; Are there enough categories to comprehensively cover the needs? Are they the right ones? Should skills be separated at all?

Certainly it seems difficult to imagine that the complex inter-relationships contained in the end product espoused by the Christie Report on Literacy, namely the "capacity to build, negotiate and communicate ideas and information both in speech and literacy" (Christie, 1991, p.25) are likely to be achieved through a sequenced set of mechanical outcomes, if, in fact, that is what OBE is to become.

The eight generic "employment related" key competencies identified by the Mayer committee may be briefly described as the abilities to:-

1. collect, analyse and organise information (research)
2. communicate ideas and information (oracy and literacy)
3. plan and organise activities (leadership)
4. work with others in teams (co-operation)
5. use mathematical ideas and techniques (numeracy)
6. solve problems (assess, predict, institute)
7. use technology (operational skills)
8. exercise cultural understanding (tolerance, social awareness).

Humanists may decry such omissions as those relating to artistic awareness, comparative value judgments, ethical or principled behaviour, empathy or emotional understanding, while methodological purists may criticise overlap between such categories as 3 and 4, 4 and 8, and 5 and 6. But are these the only, or indeed the real, objections?

Many community members have criticised the 'process' of change as constituting either change for the sake of change or else as political gimmickry involving the need for an individual minister to leave his/her mark on the portfolio. Whether such accusations are justifiable, or are exaggerations for the purpose of supporting a viewpoint, it is undoubted, as claimed in the opening paragraph of this paper, that radical change is occurring in our society, and that one of the major skills that society members need is the flexibility to cope with that change. Surprisingly, this ability itself is not mentioned among the qualities that the Mayer report sees as being essential for a literate, contributing entrant to our society.

This ability to change is, in itself, a complex procedure, but one of its bases seems to be the fact that humans cannot undergo complete change without retaining traces of former habits and attitudes that have previously figured in our existence. Thus, notwithstanding the logically contradictory nature of the process, we tend to change by still retaining features of the standpoint that we have moved away from. In fact, such conservatism is a basic, though sometimes subtle, feature of change. To illustrate, it seems evident that our tertiary institutions have been adapting

to many of the recent major changes in communal expectations that have faced them, admittedly with varying degrees of success. A recent Masters degree thesis at Newcastle University examined the attitudes and practices of university lecturers assessing NESB students on tasks requiring English literacy skills. The findings indicated that, although lecturers expressed strong opinions about literacy inadequacy in the submissions of NESB students, they were generally not prepared to fail those students because of their shortcomings. Thus, in practice, some elements of variation in standards became evident, wider tolerance being allowed for students who were not native English speakers. However, few lecturers were prepared to state this in discussing their opinions of overall literacy variations among a changing student population. Thus, in theory at least, lecturers seemed to believe that they were protecting 'standards' by being flexible with NESB students' work (Wilson, 1995). While they are not completely changing horses in midstream, they seem to be trying to guide the new horse while still retaining a firm grip on the old.

A further example occurred recently when a thesis was externally marked by two assessors, one of whom is a currently practicing head of an applied language centre, the other being an academic who retired about ten years ago but who still remains active in academic research. The former marker awarded the thesis a distinction while the latter opted for only a pass, one of the prime criticisms of the latter being that almost a third of the references were to government documents rather than to academic works. The significant influence exerted by government documentation in daily practice, particularly in relation to Literacy and NESB students, has clearly been recognised by the marker who is still practising, but the value of the priority formerly held by academic works have clearly been transgressed in the case of the retired marker. The process of change, then, needs to recognise this sense of loyalty or need to retain some of the old values.

The introduction of OBE however, contains change of a different nature. The possibility of Outcomes Based Education giving rise to outcomes driven procedures involves practices that are directly opposed to many of the liberal humanist philosophies underlying education in our tertiary sector. This has caused polarisation, rather than the type of gradual compromise being seen in the case of NESB literacy. Probably this polarisation is inevitable if we accept as an ever-present factor the need for some loyalty to the old ways illustrated above.. It is unlikely that academics will negate the deeply ingrained habits of a lifetime and change, midstream, to a horse going in the opposite direction, as OBE appears to be doing; and if the change is instituted in a top-down autocratic way and the beleaguered academic attempts to maintain his allegiance to the old views while straddling the new horse going the opposite way, the best possible of a number of rather horrifying results seems to be for the whole process to go in ever-decreasing circles, an activity not entirely unknown at universities but one which I don't think that we would care to follow to its logical conclusion here.

But what may well be a salient underlying issue here is the potential disempowerment of the academic in favour of the rational, impartial, seemingly objective set of defined outcomes. The suspicion that such outcomes may become absolute and represent in an inadequate way the sets of professional skills currently

embodied in the academic's judgment of his/her subject matter under the different conditions of a changing world is a strong but subtle factor in this proposed change that may be influential in preventing its occurrence. The type of judgmental relaxation of rules illustrated in the Wilson thesis mentioned above would not be possible under a strict OBE approach. This problem has been foreseen by the Eltis Committee who comment that:

> if Key Competencies are to be developed in school settings, they must be integral to existing syllabus outcomes, and emerge from such outcomes. The Panel does not support a position that would force any syllabus to fit an externally-imposed outcome or competency. ... Any outcomes of learning must be defined in terms of the syllabus and arise naturally from it. This should be a fundamental principle ... The Review Panel appreciates the importance of developing linkages between the outcomes of schooling and pathways into vocational education and training. ... The Panel has some disquiet, however, about ... the criteria that are being used to judge whether the Key Competencies are being achieved, and how they are being arrived at - in particular, whether their meaning has been fully explored with teachers. (Eltis 1995, p. 75)

In summary, then, it seems that the essence of the problem is, on top of all of the other changes in multiculturalism and computerisation that tertiary institutions have had to come to terms with (and this has meant learning new 'literacies' for lecturers to be able to cope with the changes), there comes another change, partially pushed by our new masters in the world of commerce, who look to such aspects as benchmarking, best practices and performance indicators as their method of assuring quality. If this change is to become effective in our tertiary institutes, its purveyors must realise some of the basics of change, e.g. too much change is too much, and change cannot be total because of the ever-present conservative aspect illustrated in this paper. It is to be hoped that our experience of the process of change in universities will at least have taught us that much. Perhaps, in order to avoid some of the types of total confrontation that have previously occurred between the opposed value systems of academia and commerce, it is up to the changees to attempt to control the process of change. We, who will have to deal face-to-face with the proposed new products of schools, i.e. those students who have learned coping strategies in OBE, (and realistically, those strategies may well be outcome driven) may well have to consider whether our own "frames" of liberal humanism and developmental educational processes are fully appropriate in a ruthless, commerce-driven world, and whether there is any possibility for compromise in incorporating suitable outcomes into our process-driven curricula.

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Mediating Cognition and Culture: A Pilot Study of the Literacy and Academic Communication Skills of First Year Commerce Students

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The measurement of students' developing literacy and communications skills is part of a larger process to enhance student learning and communication skills at university. Diagnostic literacy tests were pilot tested on 602 first year Commerce students at the beginning of a six-week Effective Communications lecture and tutorial program aimed at 'apprenticing' student writers into the "tribes and territories" of the disciplines. A post-test was applied to 405 students at the end of the module.

Kutz (1986:393) details the power of 'interlanguage' as a means of disecting and locating student writing behaviours as part of the developmental writing process. This conceptual framework when applied to the diagnostic testing procedure, enables the 'teacher' to "see what there is, as opposed to what there isn't." Overall, students improved their writing skills in the areas of grammatical and text organisation. Further, English native-speaking Australian students improved their skills in this domain more than international students or Australian students from non-English speaking backgrounds. This paper presents the findings of the pilot study. Implications of the study for testing academic literacy skills as part of the curriculum, and development of a discipline based approach to teaching generic communication skills are discussed.

Literacy and learning - Approaching the intersection

Academics, employers and professional bodies stress that there are a number of generic communication skills that students need in order to competently negotiate academic literacy within a particular discipline at both undergraduate and postgraduate levels. To compound this there is growing recognition that an increased number of first year students are "either educationally or socio-economically disadvantaged." (Higher Education Council 1992:45), and as such enter university under-prepared and under-skilled in terms of requisite communication and literacy skills (Higher Education Council 1992:45). This

notion of literacy embraces the underlying principle that literacy is a functional technology, a product of discursive practice which can be expressed as a range of literate behaviours. Those inside the discourse are privy to the systemic conventions and features which carry the material markings of the "literate" - those outside the discourse must master this technology in order to enter the 'tribes and territories' of successful discursive writing. (McCloskey: 1994) The literate individual is a construct therefore, of the compromise, conditions and patterns which operate within our institutions. She or he is a product not only of the interaction of institutional compromise, conditions and patterns, but of a capacity to adapt to and critically review changing practice in a changing world. This 'dance' it seems, is performed in relative darkness - little has been done to problematize points of intersection between the literacy specialist and the non-specialist in the process of translating academic literacy skills.

Candlin observes that despite the diversity of approaches used by universities to teach communication skills, the problem of how to diagnose and develop tertiary students' literacy skills remains largely unsolved (quoted in O'Connor 1995: 4). Candlin further argues that the problem has intensified as the proportion of students from non-English speaking backgrounds in the student population has increased (quoted in O' Connor:1995: 4). Since the "Fair Chance For All" credo of the early 1990's, access to education has become the motherhood word as researchers have continued to address issues concerning the thin wedge of access that policy is able to define. Few investigators have moved beyond institutional issues of access to learning, preferring rather to seek out and define performance indicators which serve to dispense access to learning and literacy as a procedural outcome. In essence this means compensating 'needy' students for their unstudent qualities in an oppositional framework which places learning and literacy on one axis and students on another. This in turn translates into an examination of various taxonomies which plot the "good" things about our own culture of academic literacy that do not exist in the everyday literacy of our students.

Academic literacy is not culture neutral. This managerial approach, with its emphasis on action and outcomes fails to adequately problematise the everyday relations in which literacy and learning are embedded. It is the overall patterning of institutions to treat learning and literacy issues as further "crises in educational services delivery" (Smith 1991:7) and to construct a policy imperative which simply charges the institution not to impede the access of minority groups. We therefore see emerging a proliferation of Learning Assistance 'ventures', predicated on a philosophy of self-help and upon a crude analysis of where the educational marketplace is heading. Clearly, the intersection between the social and cultural construction of the pedagogic context and academic literacy skills runs deeper than this. More is needed what is required is coined by Jones (1989:29) as getting inside learner interpretations of literacy and learning as cultural constructions, and to aid and abet student understandings of the socio-political nature and purpose of such constructions. In other words, we need to find a means to 'critically engage' and 'interrogate' our own institutional practices of literacy and learning. (McLaren 1995:18)

Like the meaning of life, this is a complex issue for any practitioner in the literacy field to confront. What is emerging in regard to literacy in tertiary education is a broad anthropological approach (Ballard &Clanchy: 1988:8) which demands that a literacy and learning culture (as well as skills) be made explicit as part of the learning process. There is polarisation, however, around the question of whether learning skills can be taught independently of the disciplines. At one extreme are those who suggest that only the discipline, and the way the discipline is taught, can (re)construct a learning culture (McCloskey:1994) At the other extreme lie the generalists who contend that through the processes of logic, argumentation or problem solving, a common or generic learning culture can be taught independent of disciplinary bases (Perry 1970, Biggs & Collis 1982).

This paper embraces that body of literature which advocates that literacy skills should be taught in the context of the writing that students do as part of their learning in particular subjects. Writing has a focus, therefore, the 'need' to write gives rise to a form that cannot be satisfactorily taught independent of content (Martin & Ramsden 1986; Nightingale; 1988). Form and style are a product of the purpose of the writing task, the direction of the question, disciplinary notions of the appropriateness of evidence and the relevance of methods for gathering this evidence. These are not properties that disciplines hold in common (Ballard 1984; Elbow 1991). It is necessary, therefore, to focus on educational institutions as 'Balkanised' sites of knowledge construction, in which any focus on writing ought to give equal weighting to questions of epistemology. In this regard, Taylor (1990, 1994) dissects the concept of generic skills into two related, but quite separate entities. One area involves the "mastery of pre-defined technologies", such as learning to use computer soft-ware packages, while the other refers to "capabilities" which are "aspects of understanding best practiced and developed in a disciplinary context" (Taylor 1994:27).

If generic skills, and discipline specific capabilities are to be exposed as the culture of the learning institution, then a means of examining these within the lived relations of the classroom is essential. This paper suggests that it is possible to facilitate students' enculturation into the tribes and territories (McCloskey 1994) of the disciplines by making the learning culture of the learning institution as explicit as possible. This paper further suggests that it is possible to quantify and measure literacy skills acquisition at the student level, and to use this as a basic dialogue to create the conditions for students to contest and mediate the academic culture of the disciplines. In critically interrogating the cultural markers of our own academic literacy, we place institutional practices under a microscope and come closer to providing genuine access to them for students learning to write into a discourse.

A FRAMEWORK FOR TESTING ACADEMIC LANGUAGE SKILLS

The present study involves the development and testing of two diagnostic literacy tests within the context of a discipline specific (Commerce) Communications module. The diagnostic tests are part of the initial stage of a broader process of

documenting students' developing literacy and communication skills, and form part of a larger process to enhance student learning in the university context. Prior to the development of the diagnostic tests, the academic staff of the faculty completed a core skills questionnaire outlining their expectations of first year student writers. These 'standards-competencies-capabilities' acted as a benchmark by which student writing and reading behaviours were measured. Our ongoing agenda seeks to legitimise literacy as a point of intersection between the instititution and its constituent parts, and involves identifying and defining academic literacy skills; devising ways to integrate these into the curriculum; incorporating assessment of these skills into overall course assessment; monitoring the development of these skills in students and devising intervention and support for students to better mediate academic culture. Systemic linguistics provides the theoretical framework for the design of the test instrument, and, as an analytical tool, best accounts for the "principles of discourse variation" (Elbow 1991:152).

The diagnostic literacy tests were predicated on the belief that the structure and composition of successful disciplinary writing is highly predictable, as long as the purpose and contextual setting of the tasks are clear. Some text and graphical/ visual data were supplied as background information to a set topic. These background materials were drawn from conventional daily newspapers and assume a general reading competency.

Students were required to undertake a critical evaluation (reading and writing) of the background information. Reading competency was measured across two criteria (Reading for Understanding - R1; Intensive Reading - R2) using seven multiple choice items and three short-answer responses. Writing competency was gauged from students' written responses (of one page in length) to a set prompt asking for validation or analysis of the background information. Written responses were measured using three writing criteria:

i)	**Organisational Knowledge**	*Grammatical and text organisation (W1)*
ii)	**Pragmatic Knowledge**	*Use of language to construct meaning (W2)*
iii)	**Discourse Knowledge**	*How language reflects and is related to generic conventions (W3)*

(Bachman 1991).

The second diagnostic test comprised different background materials from those used in the first test. Although the subject matter changed, the second test instrument used the same format and underlying constructs as the first test. The focus of the pilot study was to devise a system of measuring student writing and reading behaviours within an overt discursive framework.

The aims of the project were threefold:

(i) to develop diagnostic tests for use with undergraduate first-year students;

(ii) to document students' levels of literacy competency on commencement

of academic study; and again on completion of the six-week Effective Communication module; and

(iii) to analyse the relationship between literacy competency as measured by the test, and a range of other variables.

The notion of literacy relied upon in this project corresponds to the Applied Linguistics view of language ability as consisting of two essential components, namely language knowledge and cognitive processes (Bachman 1991). If we reconcile this with the work of Freebody and Luke (1990), it becomes possible to envisage literacy as a process in which a series of critical events - that is the development of the student as 'code breaker', 'text participant and text user' and finally as a 'text analyst' - enables a strategic mediation of academic discourse as an inherited literacy. Thus the results of the diagnostic tests are to be used as part of a deeper teaching and learning agenda, enabling teaching and teaching support staff to make inferences and predictions about test-taker capacity for using academic language in a context outside the test itself. This is in contrast to the generalised language tests (ASLPR; IELTS; TOEFL) which seek to place the test-taker on the basis of their previous experience of English (and sometimes academic) language. Thus the major consideration emerging from the use of language tests is the extent to which the tasks included in the test device elicit instances of discourse specific language use from which we can make such inferences or predictions.

HYPOTHESES - SOME GUIDING QUESTIONS

A quasi-experimental test design (pre-test/ post-test) was chosen as a framework in which to explore notions of literacy across the cluster of student groupings identified by faculty equity and administrative policies (i.e., Mature-aged students, Local Students, Non-English Speaking Background Students (NESB) and International Students). The labels attributed to these are a product of a university administration which aims to impose an imaginary coherence on collectives of very different individuals. In order to test the apriori assumptions the university makes of its students and their literacy practices, it was necessary to construct some parameters in which to locate the study. These took the form of a set of hypotheses. The following hypotheses guided the present research:

HYPOTHESIS 1

Local students will demonstrate a higher rate of skills acquisition (i.e., a test one/test two difference) compared with either international or NESB students. More specifically, local students will improve their Organisational skills (W1) and Discourse skills (W3) compared with the other two groups. This reflects a belief that significant skill development in Pragmatic skills (W2) requires deeper learning over a longer period than the length of the teaching and testing program (i.e. six weeks).

HYPOTHESIS 2

The diagnostic literacy tests will discriminate between the literacy outcomes of international students, local students who are native speakers, and students from non-English speaking backgrounds (NESB).

HYPOTHESIS 3

No differences are expected between the reading outcomes of each student group on criteria R1 (Reading for understanding), and R2 (Intensive reading). It is assumed that these skills are functional skills which serve to inform the writing process.

HYPOTHESIS 4

The literacy outcomes of non-native speaking students, as measured by the second diagnostic test, will reflect some degree of fossilisation or will have regressed. In other words, international and NESB students' test 2 scores will either be at similar levels as their test 1 scores, or will be lower than their test 1 scores. This suggests that factors such as second language learning and cultural adjustment will impact on student performance.

METHOD

SUBJECTS

The total population of first year Commerce students at Griffith University (N = 602), completed the first diagnostic test in the first week of semester and 402 completed the second test in week seven (see Table 1). The population comprises three groups of subjects. The first group were Australian students from Non-English Speaking Backgrounds. Predominantly, this group was comprised Pacific Island students from Fiji and Western Samoa, and Asian students from China, Vietnam, Hong-Kong, Phillipines, Malaysia, Japan, Taiwan and Indonesia.

The second group comprised 56 international students of diverse ethnic origin. Of the two non-native speaker groups, international students were all recent arrivals of less than two years, while the Non-English Speaking Background students had arrived three or more years before commencing study at Griffith.

The third group consisted of Australian students. Of the local student population, more than half were mature-aged students, defined as having attained 21 years of age or older, or of having relied on mature-aged entry provisions.

As Table 1 shows, there was a large proportion of students who did not complete the second diagnostic test. This was due primarily to the fact that their first assigned essay for the year fell due on the same day on which the second diagnostic test was administered causing a large drop in the number of students who attended the lecture in which the diagnostic literacy test was administered. Thus, only 405 students completed the second diagnostic test instrument (see Table 1).

TABLE 1: SAMPLE CHARACTERISTICS

Test	Group	N/ Mean Age	Sex			
			Male	Female	Male	Female
1	NESB	25	10	15	19.7	21.5
2		18	6	12	19.2	21
1	Internat	56	29	27	23.1	22.5
2		34	16	18	23	22.4
1	Australian	521	259	262	23.1	23.8
2		353	170	183	23	23.1

PROCEDURE

The diagnostic literacy test and accompanying questionnaires were administered to all first year students enrolled in the Foundations of Commerce and Administration on two occasions. The first test was administered during the first lecture of the Effective Communication module in Week 1 of semester. The second test was administered in Week 7. On average, the test and questionnaire were competed in sixty minutes during a scheduled lecture time slot.

ASSESSMENT OF THE TEST

The diagnostic literacy tests were assessed across the five criteria previously mentioned (i.e., R1, R2, W1, W2, W3). Each criterion was elaborated by banded descriptors, ranked according to levels of performance on a six-band scale (i.e., from "0" to "5"). Lower ratings across a range of criteria indicated a poor competency rating and, hence, a need for intervention. A mark of "5" was achieved when excellent competency was demonstrated while a "0" score indicated an absence of target reading and writing behaviours.

Both tests were evaluated and scored by three experienced practitioners (two Learning-centre staff and one seconded marker) trained in the use of the marking schedule. A randomly selected 30 tests were marked separately by each marker whereupon results were conferenced and moderated to create benchmark standards. Thereafter, every tenth paper was triple-marked to support inter-rater reliability.

On completion of the tests, students were given feedback in the form of a graphical representation of their performance over the five skill dimensions. The information was used to construct profiles on teaching and learning outcomes within the Foundation program. Information was constructed for each skill category and plotted on a simple set of axis for summative purposes for each student, tutorial class and target equity group.

RESULTS

DIAGNOSTIC LITERACY TESTS.

Table 2 presents the mean scores for all students on the two diagnostic tests. Overall, students scored higher in the area of organisational skills on the second diagnostic tool (M= 2.48) than they did on the first test (M= 2.29) (t2= 3.21, df = 407, p<.001). This indicates that to some extent students have been able to mediate the cultural processes of academic writing, at least to the extent of improving and addressing aspects of text cohesion and structure. The next stage of the analysis was to examine whether particular groups of students improved their skills during the six week period. As Table 2 shows, Australian students improved their organisational skills from the first test (M= 2.29) to the second test (M = 2.50) (t2= 3.23, df = 354, p < .001). The approach to teaching embedded in the Communications Module it seems would enable local students to more readily convert everyday literacy resources into the form of cultural production the university both rewards and recognises.

TABLE 2: MEAN SCORES FOR DIAGNOSTIC TESTS

Skill	Test	NESB	International	Australian	Overall
R1	1	3.07	2.67	3.44	3.37
	2	2.94	2.79	3.51	3.41
R2	1	3.53	2.68	3.48	3.41
	2	2.84	3.04	3.41	3.34
W1	1	2.33	2.35	2.29	2.29
	2	2.11	2.53	2.50	2.48*
W2	1	2.22	2.42	2.32	2.32
	2	2.16	2.44	2.35	2.35
W3	1	2.11	2.15	2.13	2.12
	2	1.94	2.05	2.14	2.12

* This mean is significantly different from the W1 mean shown above it in this column.

Test results did not indicate a change in the level of literacy skills of students from non-English speaking backgrounds nor international students over the seven week communications module. This suggests one of two things - either the Communications module failed to address these students' frameworks or the diagnostic tests failed to detect changes in student writing and reading behaviours. On the former point, Hyde (1994) strongly advocates a teaching approach which focuses on the whole person, and which avoids a narrow top-down didactic approach to E.S.P programs. On the latter point, the six-point reading and writing

subscales contained in the diagnostic tests may have failed to meaningfully discriminate between levels of reading and writing behaviours. Both of these issues will be taken up in the discussion section of this paper, pointing to recommendations for further testing and for addressing design faults with this, the pilot project.

At this point, it is important to note that student self-ratings at the close of the communications module reflected no change in inter-group differences in terms of confidence in completing the writing tasks. This further suggests that student frameworks have not really shifted since the commencement of testing. Any evidence of a behavioural shift - in terms of measurable change in reading and writing behaviours - has been confined to text organisation in local students alone (what Freebody and Luke (1990) may term text-user capabilities). This raises the suggestion that we as educators need to better address and understand the structured, collective cultural interpretations and frameworks of our students in order to effectively transmit a new literacy to them. The cultural production of academic literacy must be understood as the collective use of cultural resources to "positively respond to inherited structural and material conditions of existence" (Willis 1983:112). Only by getting inside student constuctions of literacy, can we create the necessary intersections and conditions for successful adaption and change. Whilst the role of language is not solely that of a change agent in this (a changing) world, it is often the first 'marker' in which the evidence of deeper (non-public) change is presented. Only by getting inside student constructions of literacy, can we endorse the 'writing and speaking back' that is central to forming both opinion and identity as an apprentice writer.

CLASSIFICATION OF GROUPS

Firstly, multiple discriminant analysis was used to determine whether the diagnostic literacy tests could be used to correctly classify students into three groups (i) local Australian students, (ii) non-English speaking background students, (iii) international students.

In the first diagnostic test, the discriminant function was significant ('Wilks Lamba' = .89, $p < .001$), and correctly classified 86.07 percent of subjects. Similarly, in the second diagnostic test, the discriminant function was significant ('Wilks Lamba' = .91, $p < .001$), and correctly classified 87.05 percent of subjects. Both diagnostic tests therefore, were good predictors of students' group membership.

CONFIDENCE ABOUT ACADEMIC SKILLS

A one-way MANOVA based on the criteria identified by Burns (1994:22) compared the ratings made by students regarding their level of confidence about completing the literacy tests correctly. These criteria included perceived competencies such as skim reading, deeper reading, taking notes, summarising material, writing essays, citing references, using argument, and using grammatical conventions. The MANOVA produced a significant multivariate effect ($F = 2.44$; $df = 14, 658$; $p < .01$)). International students ($M = 3.02$), were less confident than

Australian students (M = 3.64), and NESB students (M = 3.73) that they had completed the first diagnostic test correctly.

There was no change between the groups regarding their level of confidence in successfully completing the reading and writing tasks of the second diagnostic test. In Week One, when the first diagnostic test was completed, international students (M = 4.48) were less confident than Australians (M = 4.78), or NESB (M = 4.89) that they would be able to do the tasks correctly by the end of semester.

When the second diagnostic test was completed in Week Seven, international students (M = 3.50) were still less confident than Australians (M = 3.91), or NESB (M= 4.05) that they would be able to complete the writing and reading tasks correctly by the end of the semester. As the results above show, student self-ratings after the second diagnostic test reflect a more critical and discriminatory analysis of their individual capacity to accommodate the process of writing intoa discourse. The Communications module was constructed on the principle that disciplinary languages and writing styles are cognitive, and that cultural constraints - (as it turned out only in the case of the local student population) - can ease rather than intensify student anxieties about writing into a discourse. The diagnostic tests suggest that little has changed by way of reading and writing behaviours in non-native student writers. The value in measuring this phenomena lies in its' capacity to chart the distance between the cognitive absolutism of disciplinary writing and the everyday literacy of our second-language students. The international student population were treated to an intensive bi-weekly workshop program over the six-weeks of the Communications module and were able to demonstrate skills (capabilities) development in terms of Reading for Understanding (R1:Mean for test 1=2.68:Mean for test 2=2.79), Reading for Meaning (R2:M1=2.68 :M2=3.04), Grammar and Text Organisation (W1:M1=2.35:M2=2.53) and in Using Language to Construct Meaning (W2:M1=2.42:M2=2.44). The NESB student sample received no such supplemental teaching support and demonstrated a clear fall-off in performance levels in all capabilities measured by the diagnostic tests. (Refer to table 2) This has clear implications for the nature and positioning of literacy support programs in our universities, and for reconstructing the relationship between pedagogy and academic literacy skills.

PREDICTIVE ABILITY OF DIAGNOSTIC TESTS

Regression analysis was used to determine whether students' scores on the second diagnostic test could be used to predict their end-of-semester exam results in two other core modules of the first semester Foundations of Commerce and Administration program (i.e., Law and Politics). Both courses are taught as part of an integrated approach to the area of Commerce and Administration, and offer an insight into the legal and public policy influences that impact upon traditional Commerce areas of study. The Politics module comprises a 10 week study program, whereas the Law module comprises a six-week program. The exam for each module required students to write short essay style responses, to questions and background materials. Given feedback from the Core Skills

Questionnaire completed by faculty staff at the outset of the project, organisational (W1), pragmatic (W2), and discourse (W3) writing competencies are necessary for a competent performance in these exams.

The second diagnostic test was a good predictor of all student results in both Law (beta= .191, p.< .005) and Politics (beta= .246, p.< .001). A further step was to determine whether some subscales of the literacy test (i.e., W1, W2, W3) were better than others as predictors of Law and Politics exam results. Two of the writing subscales, (W2 Pragmatic skills: beta = .182; p <.05), and (W3 Discourse knowledge: beta = .186; p< .05) were good predictors of Law exam results. In addition, one of the writing subscales, (W3 Discourse knowledge) (beta = 2.23, p<.05) was a good predictor of the Politics exam results. Clearly, the results indicate that the diagnostic tests are useful as predictors of student performance in assessment pieces in other courses concurrently undertaken by first year students.

DISCUSSION

LITERACY - FROM THE TOP-DOWN OR THE BOTTOM-UP?

The present study provides some evidence of first year Commerce students' academic literacy and communication skills development. Results suggest that first year students improved their grammar and text organisational skills during the six week program, and that their perceptions of the culture of academic writing have become more culturally relative and discerning. In particular, the outcomes in local student performances tend to suggest that the goal of gradual apprenticeship into discursive writing has contributed to a shift in the organisation, presentation and cotextual cohesion of student writing in line with faculty expectations. Further, the diagnostic tests were accurate predictors of the Law and Politics exam results for all student groups. It seems that the core skills and competencies that feature in the Effective Communication module are also well represented in faculty exam assessment items, thus validating the authenticity of the diagnostic tests as a behavioural measure of the writing and reading practices in commerce disciplines.

As predicted, local Australian students demonstrated a higher rate of acquisition of Organisational skills (W1) compared with international or NESB students. This provides some evidence that the Effective Communication module is a viable teaching and learning approach for local students - especially in conveying information about sentence, paragraph and text structure and cohesion, and in acquiring discipline specific information. However, contrary to predictions, local students did not improve their Discourse skills (W3) compared with other student groups. Discourse and Pragmatic skills are clearly subject to a more complex interplay between the structural and material conditions of the institution and the frameworks of its' students. One must question the limitations of a writing or communications program to mediate the deeper processes of critical literacy in which the legitimacy of the disciplines and their cultural reproduction can be negotiated. As our students 'write into' our culture of academic literacy, it

becomes essential overtime to further empower these same students (from a variety of cultural backgrounds) to develop their own uses of academic language. In the timespan between tests (1&2) this did not appear to happen, despite some modification of surface writing behaviours. (text structure and organisation)

In terms of the test rubric itself, the spread of test results raises some questions about the sensitivity of the six-point measuring scale employed in the pilot project, and its ability to detect subtle differences in some reading and writing behaviours. In areas related to self competency ratings, local students developed a more realistic assessment of their "academic" abilities as the Effective Communication module progressed, reflecting a deeper awareness of the nature of academic tasks and the demands of writing into and mediating a discourse. This is reflected in test one and test two differences in self-efficacy ratings.

The Effective Communication module was less successful in teaching argument development [W2] to the local group. This clearly emerges as a long-term aim, one which is probably best dealt with in the "tribes and territories" of the disciplines as part of an ongoing inquiry framework. The Communications module aims to apprentice students into a critical framework, where instead of repressing student everyday language complexes, it could use these as a point of contestation, shifting students from a writer-based to a reader-based cognition in order to develop deeper thinking and understanding. To what degree these learning behaviours can be modelled in a six-week module is difficult to ascertain, suffice to say that the more visible writing behaviours (paragraph, sentence and text construction) did show some improvement (refer to table 2). To this end, in delivering the Communications Module, the pilot project may have shifted too far towards a "top-down" approach to teaching academic language skills. In this regard, instead of extending culture-marked students into the realm of academic writing, the Communications Module may have been reductionist in its' approach, and thus contributed to a resurfacing of old 'writing problems' and an adherence (in some students) to the familiar 'dance' of past patterns and habits.

The results of NESB students on each of the writing and reading subscales were lower on the second test than on the first test. This negative trend could suggest that their learning patterns may be increasingly influenced by psycho-social adjustment factors, or that the culture of the university - and its particular set of disciplines - demand a whole new approach to learning. One must question the capacity of mainstream processes to support the learning needs of this student group. In comparison to the test 1 results for local students, NESB students were not readily identifiable as a separate or different sub-group, given the reading and writing outcomes measured by the diagnostic tests. This intergroup difference emerges (with test 2) and indicates a reverse pattern of skills acquisition (a decrease) in core skills (capabilities) for NESB students, in the face of a general improvement for other student groups. In this light, the NESB group are identified as sharing a collective identity and cultural experience. What is important here is not only the fact of different cultural production by race-, language- and pedagogically-located students in the classroom, but also its'

significance in terms of understanding the processes through which the classroom contributes to social reproduction. Further analysis of the anxiety levels of this student group is underway. The results of the pilot study suggest that far greater interventionist support is needed for NESB and international students and that this support be of a particular kind. Rather than acting as the providers of adjunct educational input, teaching staff need to critically engage student frameworks to 'interrogate' notions of literacy, the construction of knowledge, the design of the curriculum, the practice of pedagogy and the omnipresent labor market which subsumes much of our focus, funding and energy. A move towards a recognition of the the whole person/student, involves a consideration of at least this - a bottom up approach.

LIMITATIONS OF THE RESEARCH

A number of limitations became evident in the pilot stage of the project, and can be improved in the next phase of the study. The two diagnostic literacy tests developed for the project need to be refined and further tests of reliability and validity of these instruments need to be conducted. In addition, it may be desirable to redesign the second diagnostic test so that it re-uses a significant portion of the background materials that were presented in the first test (a strict pre-test/post-test design). This would enhance test validity making possible the scope to elicit more detailed evidence about the impact of the module on student skill levels. Consideration must be given, however, to the influence of a practice effect on student results on the post-test instrument..

Further, it may be unrealistic to seek statistically significant changes in students' literacy and communication skills in what is a relatively short period of time. Some of the skills may require deeper learning over a longer period than the length of the teaching and testing program (i.e., six weeks).

Preliminary analysis of the results of the pilot study suggest that students may have found the items used in the second test to be a more difficult test of the core skills than those items used in the first test. For this reason, this test may have interfered with accurate measurement of students' literacy competency. The marking scale used to measure students' results across the reading and writing criteria also may have prevented stronger arguments emerging from the test data. As with many interval measures, it was found that many student outcomes were grouped around the middle of the six-point scale. A wider scale (e.g., an 8-point scale) would allow for more of a spread of scores and, therefore, a more discriminantry analysis of student reading and writing behaviours. A complication that arose from testing the entire population of first year students in the Faculty of Commerce and Administration was the disproportionate number of Australian students, compared with the sample of students from non-English speaking backgrounds and international students. For this pilot study, this also meant that some of the students in the first sample failed to complete the second test given that another assessment item (from another course of study) fell on the same day.

FUTURE RESEARCH

The next phase of the project involves replicating the study with 100 students who form part of the mid-year intake into the Foundations of Commerce and Administration course. For this follow-up study, feedback from the pilot study will be used to modify the research methodology and to address issues of the reliability and validity. The Effective Communication Module will be refined based on staff and student feedback and the results of the diagnostic literacy tests. Students will be tested on entry to the course (baseline data) as well as at the end of the Effective Communications Module. As an adjunct to this, the sensitivity of the 6 point scale used to measure student outcomes on the diagnostic tests has been reviewed, expanded and trialed as an eight point scale. The goal is to increase the sensitivity of the test items to the range of student writing and reading behaviours, and to reflect more accurate measurement of this response range. This has meant dissecting and discriminating the middle range of the six-point scale, and converting this to a more sensitive eight-point scale.

CONCLUSION

This paper offers a case-study of the development of student literacy and communications skills as part of a larger process to enhance first year student learning in the Foundations of Commerce Program. Overall, students improved their writing skills in the areas of grammatical and text organisation. Further, there was a difference in the rate at which local Australian students improved their skills in this domain as compared with international students and students from non-English speaking backgrounds.

The discipline specific approach to teaching academic literacy and communication skills adopted in this project provides a context for evaluating the practice and culture of academic writing in this - a Commerce Faculty. This approach also makes space for the testing of core reading and writing capabilities to detect and reflect changes in student literacy thresholds. The diagnostic literacy tests provide a preliminary basis for measuring literacy competency and indicate some validity as predictors of competent language use in discipline specific tasks (i.e., exams). Clearly, this enables those close to the teaching and learning intersection to make inferences and predictions about test-taker reading and writing behaviours, and their capacity to perform literacy tasks in a context outside the diagnostic test itself. In doing so, this can only enhance our understanding of literacy as a classroom practice. Such an understanding of classroom practice as the complex, structured production of all participants creates the possibility for derivation of a more 'socially useful' model (Anyon 1994) for translating academic literacy to the non-specialist. This model will involve a critical language awareness, and seeks to avoid the traditional 'top-down' approach common to 'wallpaper' models of teaching academic literacy.

For this reason the testing process does much to problematise the "dance" between

the literacy specialist and the non-specialist student. The tests have enabled the construction of a Communications module, identification of the core literacy competencies of the Commerce disciplines and have shed some light on the steps certain student groups take in negotiating the darkness in which first year study occurs.

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How Did We Get a Literacy Problem in Research Articles?

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Researchers are not illiterate by most definitions of the word, yet many are functionally illiterate in that they are unable to write about their research in terms that readers find easy to comprehend. The main cause of this "illiteracy" lies in a persistent misdiagnosis of the problem. Whereas most people and the overwhelming bulk of the published advice about how to write focus on problems within sentences, the real cause lies in the assumptions that authors make when they write an article. In particular, the assumption that the suspense format is an appropriate model is the root cause of many communication problems in research papers.

So what is literacy ?

To the person in the street, literacy would usually be taken to mean an ability to read and write. Taking this a little further, the ability to read and write would probably be defined more by its absence than its presence. Thus, somebody who could not read the label on a tin of food well enough to understand that the contents were pickled ox livers proudly packaged in the glorious People's Republic of Lower Bulldustistan would be considered illiterate.

By this food-tin definition, everybody who publishes a research article must be abundantly literate because they can obviously both read and write whole pages of sentences. However, if they are really so literate, why does everyone complain that so many research publications are so poorly written and hard to understand?

I have my own definition of literacy and it goes along the lines of being able to make oneself clearly understood in writing. By this definition, many researchers are barely literate, at best. In my own case, I took a doctorate and, on reflection, I think I came out less literate than I went in.

Back in the Dark Ages when I started my career, I did some research and, being ambitious enough to want promotion at some stage in my career, I figured that I had better publish it. So I wrote a manuscript and sent it off to a journal and waited. Eventually, I heard from the journal and, after making some revisions, it was published.

The question of literacy did not enter my head. After all, I had been through

high school and university, and I could make a good sentence, punctuate reasonably well, and spell really well. However, I clearly remember that I had trouble in writing the introduction to that first paper because I had no idea as to what should go into an introduction. Eventually, I got one, but it seemed to be a collection of words that I had to have to separate the summary from the results, rather than something that had its own reason for existing. That alone should have been a signal to me that my literacy left something to be desired, but one of the hallmarks of true ignorance is being too ignorant to recognise ignorance, so I just blundered on. A few years later, I realised that I could not expect my readers to understand what I wanted to say unless I was clear about it myself. I think that that was the point at which I started to overcome my own illiteracy. It was the point at which I discovered the suspense format, and how it corrupts so much of what passes for scholarly writing.

WHAT HAPPENS IF WE PURSUE THE WRONG PROBLEMS ?

Part of the reason that so many otherwise literate people become functionally illiterate when they prepare work for publication is that we follow the wrong models. There is an old joke about a drunk looking for a lost coin under a street lamp. When asked exactly where he lost it, he points about fifty yards down the road. When asked why he is looking under the street lamp when he lost it somewhere else, he replies that the light is so much better under the street lamp. When it comes to defining the real problems in writing, we often behave a lot like that drunk.

We get trained to read for content, but not to read for process. If we find an article easy to read, do we ever stop to analyse why it is easy to read? Practically never! Moreover, things are not much different with articles that are hard to read. We may be more inclined to analyse the difficulty, but we rarely dig down to the root causes of the problem. Often, I hear people attribute a clumsy style to poor grammar, overly lengthy sentences, inadequate punctuation, reliance on jargon and other sentence faults, but examination of the text shows that the nominal causes are only a small part of the problem. Few authors cannot make passable sentences. Instead, their real difficulties lie in creating a logical sequence of sentences and in building appropriate links between sentences and paragraphs.

Hence, we need to look beyond the individual sentences to tackle the problem. As long as we look only at the sentences themselves and not at the relationships between sentences, we make the same mistake as the drunk. Unfortunately, the error is easy to make. There are many rules about making good sentences. There are rules about agreement of verbs, use of prepositions, punctuation, noun strings, and so on. They are useful, but they are also seductive like the street light. Conversely, the rules for relationships between sentences range from the vague to the non-existent and are hard to fathom like the dark part of the street.

Aiming at the wrong target

Let's extend the metaphor a little further. What would happen if the drunk thought he had dropped a coin, but had really dropped a key? Do you think that his chances of success would improve? Authors do a similar thing because they often misunderstand the purpose of writing and that creates its own communication problems.

Let me illustrate this with two examples. A few years ago, I was at a conference on postgraduate supervision and the subject of doctoral theses arose. Part way through the debate, someone interjected with the question: "What is a thesis for anyhow?" and somebody shot back with: "To get the degree, stupid!". Worryingly, nobody gave any sign that the interjector was only half-right. A thesis is a tool for communicating and one that communicates well will get the degree, but getting the degree is only the by-product of the communicating. Similarly, some years earlier at a workshop on how to prepare articles for publication, I saw one of the participants have a major insight when she realised that her main goal in writing had been "to be published" and that this translated to her as producing something that would take up space on a library shelf. Until that moment, she had never realised that her real task was to write something that other people would find useful to read and that getting it on the library shelf was just a stepping stone, not the end of the journey.

These two examples are just two of many. In each case, the common element has been that the author has been writing to meet the author's needs rather than the reader's needs. Ideally, the two sets of needs should be the same, but it takes only a small diverge to create communication problems. As I explain in more detail soon, writing is marketing, and the art of marketing is to meet a need. Papers that meet an author's ego needs first often leave the reader with insufficient reason to buy.

Most books would have encouraged the drunk

In some respects, most of the books about how to write better have aggravated the problem.

Some have been written by people who, themselves, do not know how to write. That is a worry in itself, but even among the books written by people who are demonstrably good writers, most share the same weakness: they focus on the sentence. They typically give advice that can be summed up as:

Write clearly;

Use short sentences;

Avoid jargon;

Be concise;

Punctuate clearly;

Avoid inconsistencies, and so on.

The advice above is a necessary part of being a good writer, but it is not sufficient by itself.

Unfortunately, because so many books focus so heavily on individual words, phrases, and sentences, they unwittingly create an expectation in their readers that mastery of the sentence will bring mastery of the manuscript. This creates enormous blind spots that stand in the way of becoming literate. To compound the problem, to the extent that such books offer advice that looks beyond the sentence, they all make the same mistake of specifying the destination, but not the route. There is a huge gap between telling an author what to do and showing how to do it. Few books even come close to achieving the latter (Blicq (1987) and Murray and Hay-Roe (1986) are two worthwhile exceptions).

Ironically, much of the effort that is directed at sentences is wasted. The things that trip authors of research articles are rarely things to do with their command of the language. People who can write clear research articles usually know their weaknesses and have found ways around them. It does not seem to matter whether they understand the difference between "that" and "which" or whether they believe "none" to be singular or plural, the real issues in writing for publication lie at a higher level.

AND THE JOURNAL'S NOTES TO CONTRIBUTORS ARE USUALLY EVEN MORE USELESS

With titles like "Notes to Contributors" and "Guide to Authors", an aspiring author could be forgiven for imagining that these pages which are published regularly by all serious journals would tell the author how to put together an article.

Wrong! The people who write such pages seem to assume that the author already knows how to write an article and just needs to know about the quirks peculiar to their particular journal.

Typically, there will be one or two sentences on the subject matter appropriate to the journal and the rest (sometimes more than thirty pages!) will be about fonts, margins, line widths, journal abbreviations, and all the other things that get copy editors excited but which are totally useless to an author wondering which words to put on a page.

WHERE TO LEARN, IF NOT FROM BOOKS ?

In practice, few researchers seem to study books on writing before publishing, or, if they do, it is only after they have written an article or two.

So how do people learn how to prepare their first article? Surprise! Surprise! They copy what they read! Given the difficulty of finding satisfactory written advice, the next most rational strategy is to take the holistic approach and try to copy a successful example. And what could be more successful than a paper that has been published? Unfortunately, this strategy is flawed. Not only are

novice authors unable to recognise well-written papers when they see them (Brown 1992), but no two articles are the same, so how is an aspiring author to choose effectively between different approaches in different articles? This is where a good mentor can make an enormous difference for the better, but few of us are so fortunate, so what do we do? This seems to be where the herd instinct takes over. Faced with uncertainly, authors retreat to copying patterns that they see repeated.

To understand the significance of the previous point, you have to accept that there is probably a bell-shaped distribution between the number of research articles written and their quality. The job of the journal editor then becomes one of identifying and turning away the low-quality end and of publishing the rest. What remains is numerically dominated by the mediocre middle, so it is the mediocre middle that undiscriminating novices copy. Moreover, because the mediocre is capable of being published, the fact that it gets published just reinforces the "wisdom" of copying the mediocre. Thus, the cycle becomes self-perpetuating.

The next step is look more closely at the elements of what is being perpetuated.

The perils of IMRAD (a.k.a. the dreaded suspense format)

The scientific method is an indispensable tool in research, but it is a mixed blessing when it comes to reporting the outcomes of the research. Put crudely, the scientific method says: frame your hypothesis, then gather the evidence, then draw a conclusion. I have no argument with that, because it is a logical way to proceed. The problems arise when people try to use the same process to write a paper, because they create a suspense format.

Let me explain what I mean by suspense format. There is a common structure that is embedded in most journal articles, called IMRaD (an acronym for Introduction, Methods, Results, and Discussion). Some of you will recognise it straight away because you work in a discipline where those headings, or something close to them, are used in the literature.

There is a sequence of information that goes into most scholarly articles, irrespective of discipline. Nearly always, there is an opening section that serves as an introduction. Its purpose is to create a context for a reader and, ideally, this is done by providing a synopsis of what is already known and outlining where the author proposes to add to what is known. Following that will be some information about how the author gathered the evidence to be presented (sometimes this is implicit in the way the evidence is presented as in, say, a review article). After that, the evidence is presented. It may be data from carefully designed experiments, observations from reading published works, the author's own insights, or a mixture of all three. Then follows the analysis of the evidence, either as a separate section or combined with the presentation of the evidence. The last step is then to draw some sort of conclusion.

Once you understand this way of unfolding the story, you can probably also

guess why it is called the suspense format: the critical element is that the question comes first and the answer comes last. (Murray and Hay-Roe (1986) call it the biblical format because it starts at genesis and ends in revelations.) It has a strong logic to it and is such a common approach that most of us use it without giving it a second thought.

However, it is also the formula for the detective novel (set the scene of the crime, lay out a trail of clues and red herrings, then bring the whole to a surprising conclusion) and therein lies the problem. The suspense format is tolerable for short documents, but becomes progressively less satisfactory as the length increases. This is because the scope for the reader to get lost or confused increases exponentially with length, so it becomes increasingly less appropriate to expect readers to wait until the end to discover the answer.

None of us read everything that hits our desks. There is simply not the time, even if there was the inclination. Moreover, our readers are no different. They read to be informed, not mystified, so the first step in being literate in writing research articles is to realise that the task is to inform readers clearly, unambiguously and without delay and, to do this, you need to take a marketing approach.

When you offer an article for publication, there is an implicit claim attached to the article. That claim is that you know more about the topic than anyone else in the world and that you know enough to be able to provide an important addition to knowledge. In effect, there is a claim to expert power, but it has a dark side. It is easy for an expert to fall into the trap of thinking: "there are the facts, understand them if you are clever enough." That sort of thinking is more common than you might imagine, although it is often unconscious. Moreover, that sort of thinking blocks successful marketing.

WRITING IS MARKETING

When you write for publication, you enter a competitive market, not just for space in the journal, but for your readers' time, and that is why marketing is so important. The only person who will read an article just because you happened to write it is your mother (and perhaps not even then). For everybody else, reading your paper is an optional task. You are competing not just with other papers, but with writing a grant proposal, taking the kids to sports practice, watching television, revising last year's course notes, and so on. You have to present the reader with a reason to read, not just rely (as many do) on the naive belief that good information will automatically find its market. Above all, you have to understand that the fundamental rule of marketing is that people do not buy goods and services, they buy benefits. (Ries and Trout (1986) provide an excellent, easy-to-read digest of this topic.)

People will not read your article just because you happen to have assembled a lot of data. In a sense, your data is irrelevant to your readers. Readers do not need to know about the data itself, they need to know what you think the data

means, and more importantly, how they can use your insights to understand their own work better. In short, a reader has to be able to see some sort of likely benefit in your article before being willing to invest time in reading it. Moreover, that benefit has to hit readers between the eyes as soon as they see your document. Practically nobody will cruise through a document that presents no obvious benefit on the off-chance of finding something useful tucked away inside it.

So the task then becomes one of deciding what the benefit should be and this is usually easier said than done. I find it helpful to think of the benefit in the following terms. Imagine that you have just placed your manuscript in front of your reader, but, as soon as the reader sets eyes on it, it bursts into flames. Also imagine that the copy you have just put in front of your reader is the only copy that they are ever going to see. So far, things seem grim, but now imagine that a kindly leprechaun intervenes to offer you the chance to place inside your reader's head the one thing that you would most like your reader to have remembered had that reader been able to read your whole article. Your task is to decide what that one thought should be and it becomes the benefit that you want a reader to get from your paper. Writing your article then becomes a matter of putting the benefit up in neon lights for your readers.

So far, it probably all seems simple and obvious, but, like most advice, it is far easier to give than to apply, so I shall now move on to explaining how to make the benefit clear to readers.

The say-it-three-times strategy

There is a saying that has analogues in many disciplines. It goes like this: "When explaining something to a person, first you tell them what you are going to tell them, then you tell them, then you tell them what you told them (and if you think they might have missed anything, you start all over again)." In short, if you want to get a message across, bargain on making your point three times, or, to put it the other way around, one way to make sure that people miss important information is to insist on telling each thing only once. (Did you notice that you just read the same information three times in a row?)

Telling readers each thing only once seems to be a corollary of embracing the suspense format: each piece of information is offered in its turn but its significance is not revealed until the end.

From IMRAD to TAIMRAD

When I outlined the IMRaD structure above, I conveniently overlooked the two sections that precede the introduction, namely the title and the abstract (or summary, if you prefer). However, these two sections, along with the introduction, provide the opportunity to tame IMRaD by telling your reader about the main benefit in three different places. Unfortunately, it is an opportunity that too few authors take.

After talking with the leprechaun and deciding the most important thing that a

reader would want to remember from your article, you can neutralise the inherent problems with the suspense format of IMRaD by planting that most important thing in the title, the abstract, and the introduction.

First, let's look at the title. How many articles have you read that started with words like "The effects of ...", "A study in ..", "An approach to ...", "An analysis of ...", "Observations on ...", or any one of dozens of other "dead' openings? These are dead openings because they say nothing. The very fact that an article has been written is proof that there are some effects or analyses or observations or whatever, so there is no need for such words to occupy the most strategic part of an article, namely, the first words a reader sees. Moreover, having started with such words, such titles are nearly always designed to tease. They titillate a reader with a veiled promise that something useful will be delivered without actually delivering it.

The way to approach a title is to say to yourself: "If my readers read only my title, how can I ensure that they take away the most important information?" Writing a good title is an art, so here is an example to learn from. Remember how, back in the middle 1970s, a ship brought down the bridge across the Derwent River in Tasmania and how it enormously disrupted the lives of the people in Hobart? A paper about this disaster was presented at a conference on logistics. Its title? "When the ship hits the span!" The ingenious double-imagery in that title gets the message across superbly. It is the sort of title that, even twenty years later, many people will remember.

The abstract is the second leg of the tell-them-three-times strategy, but abstracts are often poorly written. There are two common flaws in abstracts and they often occur together. They are (a) restricting the content to just methods and results and (b) writing in a way that holds out a promise of what will be delivered without really delivering it. As with the title, both flaws follow as corollaries of the suspense format.

To be properly informative, an abstract should answer the following five questions (Brown 1994, Brown et al 1993, 1994):

(a) what was done?

(b) why was it done?

(c) what were the main results?

(d) what do the results add to theory? and

(e) what are the results good for in practice?

Interestingly, over half of the abstracts in the published literature seem to answer only the first and third questions (Salager-Meyer, 1991). In effect, many authors provide information only on the methods and results and, in keeping with the suspense format, hold back information on the significance of the work until later in their paper.

The second common flaw in abstracts is best seen by comparing the following

two abstracts (a good version and a bad version) taken from an excellent paper by Landes (1951), called "A scrutiny of the abstract".

> (Bad abstract) What should be covered by an abstract is considered. The importance of the abstract is described. Dictionary definitions of "abstract" are quoted. At the conclusion a revised abstract is presented.

> (Better abstract) The abstract is of utmost importance, for it is read by 10 to 500 times more people than read the entire article. It should not be a mere recital of the subjects covered, replete with such expressions as "is discussed" and "is described". It should be a condensation and concentration of the essential qualities of the paper.

Notice how the first version is little more than a table of contents that has been turned into a series of sentences by adding non-committal verbs to the end of each entry in the table of contents? Notice also how the second version condenses the paper? The difference between the two is most obvious if you consider the reader who reads only the title and the abstract (as many do). The reader who reads the second version of the abstract will still depart with some concrete advice about how to make a better abstract. In contrast, the reader who reads only the first version is left only with a rough idea of the topics covered in the text of the article and no real information about how to write a better abstract. A key element in making authors more literate is to help them to recognise sentences that follow the table-of-contents approach and to substitute meatier ones.

The third leg of the tell-three-times approach lies in the introduction. It is also the element that many people find hardest to adopt and the reason is always that they have strongly internalised the suspense format and cannot bring themselves to reveal the answer before the end of their article.

One of the functions of the introductory part of an article is to raise a question because, without a question, how does an author show what is being added to knowledge? Having raised a question, the next logical thing to do is to provide the answer. Not only is it logical, but it also short-circuits the suspense format. Moreover, the difference between raising the question without the answer and raising it with the answer is often only a matter of a few words. For example, after reviewing the literature, an introduction might end with a statement such as: "This paper reports a study designed to examine the effects of bombastium on billiard balls." That statement would leave a reader in suspense about the outcome of the work, but it could just as easily have been framed as: "This paper shows that bombastium can grow hair on billiard balls during odd-numbered leap years". The second version clearly has the answer (improbable as it might be) embedded in it and does the reader the greater service.

Individual sentences do matter

Despite my taking issue with books that imply that mastery of the sentence is everything, building good sentences are central to writing a readable manuscript.

There are at least four things that literate authors do that others could learn from.

The most important one is to write sentences that start with words that provide a context for readers and then to follow with words that add new information. Many authors simply provide the new information and forget to lead with words that show readers how to relate the new information to the preceding parts of the manuscript. I think that part of the reason for this lies with the suspense format: if one sets out to write a whodunit, it is easy to leave out the information that would create the links because it might reduce the suspense!

The links may be simple direction signals, such as "on the other hand", "besides", "in short", and so on (Murray and Hay-Roe (1986) provide a good discussion of these signals) or they may be more complex (see Williams (1988) or Gopen and Swan (1990) for some good examples).

The second is the practice of corrupting verbs through nominalisation.

Here is a simple example:

> "Two market segments were found to have experienced growth of more than 10%."

There is nothing hugely wrong with that sentence, except that the real action is not in the verb. The verb is just a bunch of words that say that something happened. For the reader to know just what it was that happened, the reader has to look elsewhere in the sentence and will eventually find the action locked up in "growth". It would have been better to have written:

> "Two market segments grew by more than 10%."

With the nominalisation, it may take the reader only a few milliseconds longer to understand the sentence, but small difficulties like these are cumulative and enough of them eventually make the text impenetrable and the author illiterate. (For a more extensive discussion of corrupted verbs, see Murray and Hay-Roe (1986).)

The third mark of the illiterate author is what I call comparing apples with oranges. It usually arises from a misdirected attempt at brevity. Here is an example:

> "These results differ from McSnootley and Lotsabucks (1981)."

It should come as no surprise to anyone that results are different from people, but, of course, that is not what the author meant. The author meant to say:

> "These results differ from *those of* McSnootley and Lotsabucks (1981)."

People sometimes defend this shorthand with the argument that their readers know what they meant to say, but that misses the point. I am not at all sure that everybody will always make the correct interpretation (especially with more

complicated examples than the one above), but, even if they do, they have to read the passage twice: once to decide that the literal meaning is ridiculous; and a second time to find the next most likely meaning.

The fourth element arises in making comparisons. It is a rare piece of research that does not make comparisons, yet authors often structure the comparisons to obscure the comparison rather than to make it clear. The simplest way to signal a comparison is to use a repeating pattern of words. When the reader starts the second or third leg of the comparison, the fact that similar words appear in a similar order sends a signal to the reader that a comparison is being made and allows the reader to start making the comparison before the reader otherwise has enough information to do so. In practice, I find that plenty of authors randomise the order of presentation of their information or else do things such as making the first leg of the comparison in a single sentence but then splitting the second leg into two or more sentences and so make it hard for the reader to tell that a comparison is being made at all.

Again, it is hard not to suspect the hand of the suspense format where comparisons are poorly signalled. Some authors may think (unconsciously) that it is better not to make the comparison too clear or else the surprise will be spoiled! In reality, even an exceedingly well-written research article makes significant intellectual demands on its readers, so trying not to spoil the surprise may spoil it totally because a reader may never understand it!

The first person is forbidden in research articles !

One of the most common misconceptions among researchers is that journals will not let them use "I", "me", "we" and other pronouns in the first person.

If you wish, you can prove the fallacy of this for yourself by repeating a short experiment done by John Kirkman. Kirkman (1980) selected 81 journals at random in his university's library and found 74 had published articles written in the first person. Moreover, they were all leading journals and included the *American Journal of Physics*, the *British Medical Journal*, *Econometrica*, *IEEE Transactions*, the *Journal of Applied Ecology*, the *Journal of Fluid Mechanics*, the *Journal of the Royal Statistical Society*, *Nature*, *Polymer*, *Progress in Materials Science*, and *Psychopharmacology*. The whole exercise took him only two hours and, had he spent longer searching each volume, some of the remaining seven may have yielded an article in the first person.

The issue of using the first person is important at several levels. On one level, first-person pronouns are an invaluable tool for separating the facts (third person) from the author's interpretation of them (first person). On another level, first person pronouns help create the enthusiasm that makes a paper readable (Maddox 1983).

On a different level altogether, the first-person issue is important because it demonstrates how people are capable of failing to read what is put in front of them. Given that most journals publish articles written in the first person, it is

inconceivable that so many people could have avoided reading any. The only reasonable explanation seems to be that they did not see what they read.

AUTHORSHIP

The world's most published author of scientific papers is reported to be Yury Struchkov. Over the last 10 years, he has turned out 948 papers and got an average of 3.0 citations/paper. He runs a big crystallography lab in Moscow and, if you want to use his equipment, he requires you to make him an author.

So what has this got to do with literacy? Misconceptions about authorship add a lot to literacy problems because they often give rise to "gift" authorships. In a nutshell, authorship belongs to those who stand to defend the published work. This gives rise to five basic principles (condensed from Huth, 1986, and Day 1983):

Principle 1. Each author should have participated sufficiently in the published work to take public responsibility for the content.

Principle 2. Participation must include three steps:

(1) conception or design of the work represented by the article, or analysis and interpretation of the data, or both;

(2) drafting the article or revising it for critically important content; and

(3) final approval of the version to be published.

Principle 3. Participation solely in the collection of data (or other evidence) does not justify authorship.

Principle 4. Each part of the content of an article critical to its main conclusions and each step in the work that led to its publication (steps 1. 2, & 3 in Principle 2) must be attributable to at least one author.

Principle 5. People who have contributed intellectually to the article but whose contributions do not justify authorship may be named and their contribution described – e.g. 'advice', 'critical review of study proposal', 'data collection', 'participation in clinical trial.' They must have given their permission to be named. Technical help must be acknowledged in a separate paragraph.

The practice of providing "gift" authorships is unethical and runs directly contrary to the principles above, but is remarkably common. It even arose during the discussion that accompanied the original presentation of this paper at the Literacy Conference. The person in question had asked for statistics from another research institute only to be told that a condition of being given the statistics was that the institute's nominee would be made an author of any publication that arose. There was no discussion of what the nominee could contribute to the manuscript and it was clear that the granting of the authorship was rent to be extracted for the use of the statistics.

This notion that authorship is an automatic property right over data attacks literacy by ignoring the fact that the value of a document rests on the quality of

the insights it presents, not on the fact that some numbers were collected or by whom they were collected.

SO, IS THERE A SOLUTION ?

Yes and no. On the one hand, the solution is remarkably simple: just walk away from the suspense format. This requires authors to decide on the main message that they want their readers to take away, then to craft their title, abstract, and introduction so that the main message is clear to their readers. This approach will not fix every defect in an article, but it will take an author further down the track than any other strategy. Also, I find that when authors do this, it creates a clarity that allows a lot of the other problems to resolve themselves.

On the other hand, fear complicates things and fear is the main reason that authors fail to make the main message strategy work. In many ways, researchers are like bankers. Back in the 1930s, John Maynard Keynes was asked why, with so many danger signals obvious to everyone, did the banks persist with their course of action even thought they must have realised that it was extremely likely that most of them would fail if they persisted with that course of action. Keynes replied that the banks felt it was safer to stick to the "sound" course and so fail together than to change to a different course that would provide a greater chance of survival but also bring a chance of failing alone. Researchers are often not much different: the fear of being unconventional keeps so many researchers wedded to the suspense format. It is ironic that iconoclasm is a key part of a researcher's role, but that so many feel that the icons can be broken only with conventional tools.

Nevertheless, abandoning the suspense format can work brilliantly well. I run workshops for authors in which I show them how to avoid its straight-jacket and I have had many success stories, not least of which are several novice authors who have had papers published by international journals that were so clearly presented that they were published without any revision whatsoever.

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Comparing the Citation Choices of Experienced Academic Writers and First Year Students

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The practice of citation (or referencing) is characteristic of academic writing. However, students are often confused by the many possible functions of citation, and the way these can be linguistically realised. This paper examines Political Science texts of experienced academic writers and first year students, in the light of a framework for considering citation choices. Compared to the experienced writers, the students exercise a narrower range of citation choices, or often fail to apply these choices in a way that controls their reader's focus on points of academic 'controversy'.

Introduction

In academic writing, citation is the explicit citing of another's text within one's own. It is also referred to as 'referencing' or 'reporting'. As Swales (1986:47) puts it, citation is the writer's problem of handling the dual requirement of stating both what has been found and who has found it. As Study Advisers, every day we read student texts across the range of disciplines taught at the Australian National University and are very aware that many students find citation difficult. They see it primarily as protection from the charge of plagiarism. Academic staff, on the other hand, see it as something fundamental to scholarly pursuit. They insist on it, and frequently comment negatively on students' attempts to use it. However, such comments are usually vague because academics themselves are not conscious of the way variations in citation language can realise fine distinctions in meaning.

This paper proposes a model for understanding the significance of variations in citation language. The model was developed from analysis of the citation practices of experienced academic writers, initially in Biology (Buckingham and Nevile 1995), and then in ten published papers in Political Science. For this specific aspect of academic writing our goal was to better understand what it is that student writers do, and do not do, that marks their texts as immature. To this end, we used the model to analyse the citations of twenty essays by first year Political Science students. Our ultimate aim is to use the model with our students.

CITATION IN ACADEMIC WRITING

Citation is frequently raised in general discussions of academic discourse and culture (eg. Becher 1989, Swales 1990, Bhatia 1993), but increasingly citation is a specific focus of research. For example, Swales (1986) drew together studies of citation in the separate literatures of Applied Linguistics and the sociology of science (such as Gilbert 1977 and Cronin 1981). He presented a 'featural scheme' and traced citations of a particular paper in the relevant literature. Campbell (1990) used a controlled study to categorise students' use of a chosen background text in a composition task. Although the task was somewhat contrived, Campbell concluded that "none of the students...seem to have a mastery of the appropriate acknowledgement of another author" (1990:223). Bloch and Lan Chi (1995) compared the time period and manner of the citations in Chinese and American academic research papers. Finally, Baynham et al (1995) reported on the beginnings of a project investigating citation in students' writing and compared the way two students position themselves in dialogue with others' works.

Of greater relevance for directing our research, however, were particular papers which focussed on specific features of citation language. Thomas and Hawes analysed citation in medical journal articles and mapped out very detailed networks of options for both the type of 'reporting [citing] verb' (1994a) and 'thematic' patterns in reports (1994b). Their aim was to establish patterns between particular options and the rhetorical function of the reports. Similarly, Shaw (1992) examined correlations of grammatical voice (active/passive), tense and sentence function in reporting verbs. He found correlations to be strongly influenced by paragraph structure and topic development, and that therefore "there may be mediating mechanisms between a rhetorical function and the form that appears to represent it" (1992:317).

These papers were valuable in identifying and describing in detail particular characteristics of citation language. Our interest was in the role of citation in creating intertextual understanding. We wanted a means for describing how variations in citation forms reflect the relationship of the writer's text to other texts. This is possibly what Shaw meant by "mediating mechanisms".

COLLOQUY AND CONTROVERSY

Academic writers place a value on citation which reflects a number of assumptions. These have been written about by Becher (1989) and can be simplified into the following:

- knowledge arises from a dynamic system of research, analysis and communication
- intellectual property is valuable
- academic endeavour must be relevant to disciplinary interests
- indication of sources allows verification of research and thinking
- indication of sources makes further research and thinking possible.

The first assumption is that the academic world consists fundamentally of people researching, analysing, and communicating with each other. It is a complex multi-member colloquy in which any individual researcher's 'studying', 'finding', 'arguing' etc. occurs always in the context of other researchers 'studying' etc. The act of citation necessarily points to such processes. The moment a writer cites, this colloquy exists. Citation language forms reflect the complexity of this colloquy, which consists of the writer, past authors/researchers, and the immediate reader and future academic readers. Inherent to this colloquy is the notion of controversy, which represents the points of potential or actual difference between members from which new knowledge arises. These are the points where knowledge is presented as negotiable or actively challenged. Other members of the colloquy may well be 'studying', 'finding', 'arguing', 'knowing' etc. something different, even contradictory to the cited author, or may have done so in the past, or may do so in the future. If this were not so, it would not be necessary for the writer to cite. The notions of colloquy and controversy are crucial to an understanding of the implied meaning of any citation. The notion of colloquy is preferable to 'dialogue' (used by Baynham et al 1995) because it better captures the sense of a network of writers, readers and texts to which any individual text must relate.

By citing, writers are therefore positioning their own texts in relation to the colloquy, and in so doing can control their reader's sense of 'engagement' with both the colloquy and the writer's own text. By engagement we mean simply a critical academic attitude of doubt or challenge. Writers can use citation language forms to signal the points in the text where they themselves are engaging, what the writer sees as controversial, and in so doing where they wish their readers to do so. It is in this way that variations in citation language are related to differences in intertextual understanding. We sought to develop a model to represent these relationships. In Thompson and Ye's (1991:380) words, the model would seem to be one way of "linking evaluation in report structures with the overall realization of evaluation in academic papers".

DEVELOPING THE MODEL

The model incorporates three valuable distinctions presented in the literature. First, Thompson and Ye (1991) distinguish between reporting verbs which represent 'author acts', that is those for which the cited author is responsible, and 'writer acts' for which the citing writer is responsible. An author act is simply something the cited author is said to have done. For example the author 'studied', 'found', 'argued', 'believed' etc. A verb phrase represents a writer act if the writer is using the citation itself to make a point for which the writer is responsible. We found one sign of a writer act to be the nominalisation of an author verb, ie. the author's verb is turned into a noun. This is evident in Thompson and Ye's (1991:378) examples: "X's model accounts for..."; and "X's claim corresponds to...". In these examples we can see that 'X models' (verb) has become 'X's model' (noun), and 'X claims' (verb) has become 'X's claim' (noun). The citing writer is therefore responsible for saying what the model 'accounts for', and for

what the claim 'corresponds to'.

The second distinction, adapted from Thompson and Ye (1991), is between 'denotational' and 'evaluational' verbs. The difference here is that evaluational verb phrases include some sense of the writer's interpretation of the author's act. This interpretation varies from verbs such as 'argues' or 'believes', which show the citing writer's understanding, to verbs such as 'demonstrates', 'proves', 'admits' or 'acknowledges' which include a sense of acceptance or non-acceptance. Denotational verbs, such as 'say', 'report', 'study', have no such writer interpretation. The choice of the verb phrase itself makes visible the attitude of the citing writer.

The third distinction, from Swales (1990:148), is between Integral and Non-integral citations. Usually, a citation is Integral if the name of the cited author/researcher appears in the citation sentence as a sentence element. It is Non-integral if the author/researcher's name is given in parentheses or is referred to elsewhere eg. by a superscript number. We also include as Integral citations the use of 'dummy' or generalised author/researchers, in phrases such as "Many commentators", "Some critics", "Political analysts" etc. While these lack the impact of a specific name, they make up for this by being plural and are usually supported later by a name in parentheses. The critical point is that an Integral citation gives prominence to a cited author and member of the colloquy.

Other features of citation language which are frequently discussed in the literature, such as grammatical tense, voice, and thematic (clause initial) position, were found to be too variable in Political Science for inclusion in the model. For example, thematic position increases the prominence of cited authors or reporting verb phrases, but for our purposes it is too strongly influenced by the macro-organisation of the text and the ongoing development of content.

THE MODEL OF CITATION OPTIONS

The model was derived from our analyses of citations in ten papers written by experienced academic writers in Political Science. It presents five main options, with two of these further divided according to the nature of the citation verb phrase (denotational or evaluational). For each option there is a predominant textual form which represents a certain level of controversy and engagement with the academic colloquy. The model is not an attempt to account for every citation form possible and be able to say definitively what any individual citation 'means'. Instead, we agree with Thompson and Ye (1991) that the effect of citations is often cumulative and citations are best understood as working over stretches of text.

Together, the options form a continuum representing increasing levels of engagement. The model does not imply that some options are more advanced or academically sophisticated than others. Depending upon the aims of the writer, choices may be more or less appropriate. The mark of authentic academic text is variation in citation language forms which is consistent with the intertextual understanding intended by the writer. Experienced writers are able to choose

among the Options to control engagement with the colloquy and the focus on controversy, and balance these with the demands of developing topics and lines of argument. They present a balance between the extremes of accepted and uncontroversial knowledge, where engagement from the reader is not intended, and affected knowledge and initiated controversy, where engagement from the reader is expected. Having said this, it appears that some level of actual engagement and controversy is necessary for legitimacy: every argumentative academic text must at least present knowledge as challengeable.

The model is presented in the appendix at the end of the paper, and the options included in this model are explained below.

EXPLAINING THE OPTIONS

OPTION 1

Option 1 is both Non-integral and uses no reporting verb phrase. In terms of the citation, there is no recognition of a colloquy and no sense of controversy. Knowledge is accepted and taken as given. The writer's own text is intended to be secure from the reader's engagement. It is not the case that this Option is primitive, and it was commonly used by experienced writers in Political Science. Instead, it conveys that the writer does not view something as controversial, does not wish to engage with the colloquy, and does not wish the reader to do so. Controversy will be elsewhere.

> South Australia seems to have a reputation for being a pioneer in many fields of public policy, possibly a result of the coincidence of manageable scale with a longstanding (through perhaps declining) culture of public sector reformism (Stretton 1975, p. 201) [OPTION 1]. It would be interesting to examine further the inter-State diffusion of policy and managerial innovations (Moon 1987) [OPTION 1]. Diffusion has probably quickened in recent years through the adoption of more sophisticated policy and management structures by State governments and through the proliferation of intergovernmental Ministerial Councils and meetings of senior officials in a process of 'executive federalism' (Chapman 1988, Sharman 1991) [OPTION 1]. The recent series of Special Premiers' Conferences can be understood as not only trying to reform 'vertical' Commonwealth-State relations but also as bringing more coherence to the increasing scale of 'horizontal' State-State relations.

OPTION 2

Option 2 is Non-integral but has a reporting verb phrase representing an author act. By signalling processes of research, analysis and communication, these verb phrases imply the members of the colloquy responsible for the processes. In this way a colloquy is recognised but not actually engaged with. The writer is acknowledging potential controversy as knowledge is now vulnerable. There is now the chance of reader engagement. The option is sub-divided A and B

according to whether the reporting verb is denotational or evaluational. An evaluational verb phrase enhances the sense of controversy and engagement with the colloquy by including the writer's interpretation, but it still does not focus on the author. Again, the writer is aware of controversy, but chooses not to open it to the reader.

> This revival of the classic obsession with a work orientation is an international phenomenon. It has been observed that the economic adjustment occurring in most OECD countries involved a concerted effort in the late 1980s and early 1990s 'to ensure that social security systems do not unduly weaken the incentives to work, to save and to change jobs'.[OPTION 2A] In Australia the pursuit of this goal can be seen in respect of many provisions, particularly unemployment benefits, sole parent pensions, disability allowances and the provision of the Family Allowance Supplement to the working poor.

OPTION 3

This option is Integral, but has no reporting verb phrase. The use of the author's name is powerful enough to introduce a sense of engagement with the colloquy and actual controversy. Knowledge is now presented as negotiated and so engagement from the reader is likely. The writer does shift the focus to the cited author, but then distances the reader from the engagement by omitting the reporting verb phrase which would carry the writer's interpretation.

> 'Regimes' have been defined both tightly and loosely, but one of the most quoted definitions is that of S. Krasner. According to him, a regime exists when there are 'implicit or explicit principles, norms, rules and decision-making procedures around which actors' expectations converge in a given area of international relations'.[OPTION 3]In the sense that almost every aspect of international life—economic, legal, military, or political—is conducted in a stable environment in which there are predictable and restraining patterns of behaviour, international society is criss-crossed by regimes, both explicit and implicit.

OPTION 4

This Option is both Integral and has a reporting verb phrase which represents an author act. Like Option 3, knowledge is presented as negotiated and there is actual controversy and engagement with the colloquy. By referring to both a member of the colloquy and an academic process (the verb phrase), this Option signals greater engagement than Option 3. The citation form makes visible both the author and the citing writer. The Option is used where the controversy is explicit, recognised in the discipline, and where engagement from the reader is expected. Like Option 2, this Option is sub-divided A and B according to whether the reporting verb is denotational or evaluational. This Option was very common in the Political Science texts of experienced writers.

> Others have taken a very different view, arguing that there is a basic

clash of values between the 'technical rationality' of corporate cultures and the career-permanent traditions of public service with its ethical concerns (Considine 1988; Sawer 1989; McInnes 1990) [OPTION 4B]. Wilenski has suggested that there is conflict between the cost-cutting approach of managerialism and the human resource approach of motivating people and encouraging creative responses to problems (Wilenski 1986b) [OPTION 4A]. McInnes has claimed that after David Block's efficiency scrutinies there was a 'shift from the original reform preoccupation with skills, resource allocation and employment equity to an emphasis on cost related efficiencies based around deregulation and privatisation and the overall strategic identification of opportunities and options for savings to the public purse' (McInnes 1990:113) [OPTION 4B]. Considine has argued that those managers 'concerned with such things as future policy development, staff training or the improvement of quality of work, appear to lack the capacity for attracting sufficient status in this environment because their "outcomes" are viewed as intangible' (Considine 1988:12) [OPTION 4B].

OPTION 5

This Option is Integral, but the significant difference here is that the reporting verb phrase represents a writer act. By actually using the citation to take responsibility for saying something new, the citing writer is initiating controversy and now affecting the colloquy as a full participant. Knowledge is now affected by the writer and not the cited authors. The writer is therefore using the citation form to engage the reader and future authors/researchers.

Castles suggests that Australia would have been appropriately termed a 'wage earners' welfare state'. [OPTION 4a].....As Castles' analysis of the links between employment regulation and welfare demonstrates, the concept of 'welfare state', in its broadest form, is not confined simply to those elements traditionally denoted by the term welfare, that is, pensions and benefits and services to the poor [OPTION 5]. In its broadest sense a welfare state should be concerned with the well-being of all citizens and the degree of equality, or redistribution, that is achieved through all of the state's actions or lack of actions. At its broadest, then, the concept should be just as concerned with the effects on the well-being of citizens of, for example, monetary and tariff policies, support for the arts and sciences and the framework and enforcement of criminal and civil law as with the effects of unemployment benefits and public housing.

To summarise so far, the model we have presented is not a developmental progression, but a range of Options from which experienced writers choose to create intended intertextual understandings. Through variations in citation language forms, they are able to control engagement with the academic colloquy and focus on points of controversy.

CITATION IN STUDENT WRITING

Twenty student papers were chosen, all written as regular assessable items during a first year Political Science unit at the ANU. In length, the papers ranged from 1500 to 2000 words. Only papers graded Pass or better were included. Scores for the papers ranged from 55% to 80%, with most between 60 and 75%. The number of citations per paper ranged from 9 to 43.The total number of citations across the twenty papers was 467, with an average of around 23 citations per paper.

Compared to the experienced writers, the students exercised a narrower range of citation options, or often failed to focus their reader on points of academic controversy and control their reader's engagement with the colloquy. Many chosen options created misleading expectations about the way the writer's text related to the colloquy.

The clearest difference in students' writing was the tendency of nearly half of them to rely mainly on Option 1. Four students used only this Option (one of them 43 times). In terms of citation forms, these students' texts do not to engage with the colloquy at all. Citation choices give little or no recognition of academic knowledge as constructed through processes of researching, analysis and communication. Knowledge is a set of facts to be discovered and accepted. Nothing is presented as controversial and the texts always resist engagement from the reader. Sources are presented as authoritative, and citations perform a narrow legalistic function as a means for showing ownership of ideas and words. Recalling the assumptions described earlier, such citation choices reflect the students' understanding of the value of intellectual property and the need to indicate sources to allow verification of research and thinking. The following consecutive citations show such use of Option 1:

> Democracy is a concept, an abstraction, a term with no single precise and agreed meaning (Arblaster 1987:1). [OPTION 1]
>
> However, modern day democracies basically encompass balance of representative government that is responsible to its people and is governed by the rule of law to lend it legitimacy (Jaensch 1989, and Kakuthas et al 1990). [OPTION 1]
>
> It [Australian democracy] is also a system that lets individuals and associations pursue their varied interests and resolve their conflicts in a peaceful and orderly manner (Kakuthas et al 1990:133, 90). [OPTION 1]
>
> The application of the rule of law by the judiciary ensures that the government is not arbitrary in its laws and opinions (Jaensch 1989). [OPTION 1]
>
> Australia has led the way in granting the franchise to its citizens, and by the 1960s had extended that right to the Aborigines as well (Smith and

> Watson 1989). [OPTION 1]
>
> In a system of government which has its citizens involved with a single and important political decision,..., it is essential for the politician to realise what the voters want and how the government is perceived in their mind (Aitkin et al 1989). [OPTION 1]

Conversely, a few students presented very little knowledge as accepted and uncontroversial. These students did choose from the range of citation forms, but Option 1 was rarely used and so everything was presented as controversial and under negotiation. These texts appeared always to be encouraging engagement from the reader. In terms of citation forms, the writer's text is presented as unstable and lacking an accepted knowledge base from which new points are made. These students have a 'feel' for what their texts should sound like, but are using the forms without the intertextual understandings and the underlying assumptions of experienced Political Science writers. The following are consecutive citations from one paper:

> Lucy (1985:104) states "Studies of voting behaviour suggest that political apathy...correlates with low socio-economic status and low educational attainments." [OPTION 4A]
>
> Skurnik and George (cited in Smith 1983:248) stated that the person who goes to the polls in the voluntary system is most likely to be a white, middle-aged, well educated man with a middle to high income. [OPTION 4A]
>
> Bob McMullan (cited in Adams 1992:2) said that under a voluntary system, the young, the homeless, Aboriginals, the unemployed and the poor would be far less likely to vote. [OPTION 4A]
>
> He states "To be by the people for the people, government must be judged by all the people". [OPTION 4A]
>
> As voting is compulsory the government will be more responsive to the communal opinion (Crisp 1978:130). [OPTION 1]
>
> Crisp (1978:132) states "...whatever its shortcomings, [compulsory voting] does keep the politicians uncertain of power and therefore responsive to the current of opinion." [OPTION 4A]

At times, the particular confusion arose in the use of reporting verb phrases. Student writers, facing a huge range of possibilities (Thompson and Ye (1991) counted over four hundred), may overuse particular verb phrases, use them inconsistently, or otherwise fail to appreciate the expectations their use would raise in the mind in an academic reader. Some verb phrases, particularly those referring to 'discourse' (Thomas and Hawes 1994a) or 'textual' acts (Thompson and Ye 1991), such as 'state', 'suggest', 'report', 'claim', 'argue', 'maintain',

may be used interchangeably. Experienced writers, with a better understanding of the way academic knowledge develops, appreciate (even if unconsciously) the subtle evaluative distinctions between particular verbs, and so use to effect.

Occasionally student writers seemed to achieve a balance. The following consecutive paragraphs show how one student writer chooses among the options to move from establishing background to introducing controversy. Note the shift in the use of the author Bogdanor, and the change in verb phrase, before the writer's contrasting point and an alternative author appear:

> Electoral systems can magnify or minimise societal conditioning and prejudices and in turn affect party competition (Bogdanor 1984:111). [OPTION 1].....Women are under-represented in relation to their numbers in the general population in all countries, however this is more acutely so in countries such as Britain and the USA which use single member constituency systems, as opposed to countries where a party list system is in place. Under a party list system women's representation increases up to sixfold (Bogdanor 1984:114). [OPTION 1] The possibility that this is due to lower general levels of prejudice in these communities may be discounted by comparing female participation in non-traditional areas such as medicine, engineering etc. Their numbers are similar, if not lower. So it would appear the increased female and minority representation is due largely to the electoral system.
>
> Bogdanor (1984:115) suggests the most likely explanation for the correlation between party list systems and increased female and minority representation. [OPTION 4A] He [Bogdanor] argues that in constituencies where gaining a seat depends on a single candidate win, selection committees will be predisposed to selecting what they perceive as a low risk candidate. [OPTION 4B]. HOWEVER, where a party list system is in place, attempts are made to present a balanced ticket, necessitating the inclusion of women and minorities. In the USA for example.....In such systems the election prospects for women and minority groups is improved (Rule and Zimmerman 1992:4). [OPTION 1]

CONCLUSION

The model we have presented links variations in citation language to intertextual understanding through a range of citation options. We have found that compared to the texts of experienced writers, students' texts seem intertextually confused. There is commonly a mismatch of citation form and intertextual understanding. Student writers have difficulty in using citation forms to appropriately signal their relation to the colloquy and to focus their readers' attention on points of controversy, these being the negotiated areas of knowledge with which the writers are concerned. In so doing, student writers confuse their own readers' ability to know when engagement is resisted or welcomed.

Citation is a fundamental but complex aspect of academic writing, and one which students need to control if they are to write credible academic text.

Warnings from academic staff against the evils of plagiarism may encourage only a narrow view of citation as a means to show ownership of ideas and words. Citation allows much more than this. Student writers will be in a position to use citation more convincingly if they are given greater understanding of both the assumptions underlying the value that academics place on citation, and the intertextual significance of variations in citation language forms.

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APPENDIX: MODEL OF CITATION OPTIONS

INTERTEXTUAL UNDERSTANDING	OPTION Predominant textual form	EXAMPLES	
No recognition of colloquy	1 NON-Integral NO Reporting Verb phrase	Labor was a strong party (Smith 1993)	No controversy Knowledge accepted No reader engagement
Recognising colloquy	2 (A) NON-Integral AUTHOR Reporting Verb phrase (Denotational)	It has been *said* that Labor was...(Smith 1993)	Potential controversy Knowledge vulnerable Possible reader engagement
	2 (B) NON-Integral AUTHOR Reporting Verb phrase (Evaluational)	It has been *argued* that Labor was...(Smith 1993) Research has *shown* that Labor was...(Smith 1993)	
Engaging colloquy	3 INTEGRAL NO Reporting Verb phrase	According to Smith (1993), Labor was... In Smith's (1993) theory, Labor was...	Actual controversy Knowledge negotiated Likely reader engagement
	4 (A) INTEGRAL AUTHOR Reporting Verb phrase (Denotational)	Smith (1993) *says* that Labor was... Smith (1993) *studied* Labor's strength...	
	4 (B) INTEGRAL AUTHOR Reporting Verb phrase (Evaluational)	Smith (1993) *argues* that Labor was... Smith (1993) has *shown* that Labor was... The strength of Labor was *demonstrated* by Smith (1993)	
Affecting colloquy	5 INTEGRAL WRITER Reporting Verb phrase	Smith's (1993) view that Labor.. *explains* the electoral success of the party	Initiating controversy Knowledge affected Actual reader engagement

Expectations of Academic Writing at Australian Universities: Work in Progress

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Student success at university depends largely upon how quickly they can adjust to the expectations of their lecturers. This is especially so in relation to their writing skills, by which they will, for the most part, be assessed. Students must learn how to write with a style and a content which is perceived to be acceptable and to be within the constraints of the academic discourse community.

This paper will present findings from a survey of academics at a number of universities throughout Australia. The survey examined the views of academics with regard to their expectations of student writing and the importance of the major features of writing. The purpose of the research was to inform teachers who prepare students for Australian universities or who assist university students with study skills, in particular, it aimed to inform teachers of overseas students, who are often unaware of their lecturers' expectations.

Background

This study arose out of a discussion a number of years ago between three English for Academic Purposes (EAP) teachers at an ELICOS Centre and an overseas student who had just commenced her studies at university. In a sense, the EAP teachers were pumping this ex-ELICOS student for information. We wanted to know what her lecturers' expectations were, the types of tasks she was being set and how she was faring in terms of the lecturers' assessment. As teachers who had come through the humanities area, we had only a sketchy idea of the demands of other discipline areas.

This discussion prompted the idea of surveying faculty in order to examine the differences in expectations they have with regard to academic writing. At the time I was an EAP teacher at the University of Canberra and the survey consisted of items which arose from my reading in the literature and from my own experience as a teacher of overseas students who were rapidly approaching the reality of having to cope with tertiary literacy in an English-speaking environment.

Following the survey, I gave a paper on the results at the ACTA-WATESOL

conference in Perth in 1994. A number of like-minded individuals approached me with a request to carry out the same survey at their own universities. In the end, we formed a network of researchers carrying out the same research into what Australian academics expect of their students' writing. The results that follow represent a "work in progress" view of this network's research, as the results from two universities in the network are not yet completed.

ACADEMIC WRITING

There now appear to be two approaches to the acquisition of tertiary literacy appearing in the literature, one of which proposes that tertiary students must gradually acquire the literacy skills and behaviours appropriate to successful completion of their studies. Johns (1990) calls this approach the "social constructionist" approach, where the writer begins as an outsider and must learn the rules in order to become an insider. The other, more recent, approach seems to be that students should "not be forced to acquire academic literacy and become part of the academic discourse community" (Johns, 1990, p. 29). The latter approach does not seem realistic in the face of the power which academics wield to pass or fail their students. "Ultimately, of course, it is the students who must (and mostly do) have to make the major adjustments to meet the educational demands of the programme" (Ballard 1995, p. 211). Students who fail to read the signs of appropriate language and literacy behaviours which surround them, quite often do not complete their courses.

Lietz and Martens at Latrobe University examined whether students' learning and writing difficulties impacted on their end of year results. While they found that these difficulties do not have a direct influence on final results, they "have a sizeable negative impact on students' self-rating of academic performance which, in turn, has an impact on students' actual performance" (p. 14). In other words, students' lack of confidence in their literacy skills may lead indirectly to poorer performance.

Students usually learn literacy skills from the feedback they are given by academics on their assignments and essays; however, more and more students are being explicitly taught these literacy skills in pre-tertiary language courses, bridging courses (see Felix and Lawson 1994 for an evaluation of a bridging course) or study skills centres. In order to provide adequate training in tertiary literacy, teachers of these courses must be informed as to the specific requirements of the wider academic community (see May and Bartlett, 1995). The present study seeks to fill a gap in information about the writing requirements of Australian academics. Johns (1993) believes that this area of research, ie readers' expectations, has been "the least explored in the literature" (p. 75) and that it is especially important for second language students to acquire knowledge of their readers' expectations.

Two surveys in the UK and US examined the writing expectations of academics in other English-speaking countries. A survey by Weir (1988) examined the views of both students and academics in British universities in order to discover

the importance of various aspects of student writing. Weir's main conclusion was that "subject tutors are more concerned with content than with mechanical accuracy features" (1988, p. 25). Similarly, Eblen (1983) surveyed all faculty at the University of Northern Iowa and found that "overall quality of ideas" (p. 344) was the most important criterion, followed by "organization", "development", "grammatical form" and "coherence". There seems to be a clear message from these previous studies that the quality of the content in a student text is more important to faculty than the sentence level features (see also Harris and Silva 1993).

To return to Australian universities, it should be noted that there appears to be growing concern, both in the media and in the literature, about the literacy levels of university students both prior to entry and on completion of their studies. According to Bourke and Holbrook (1992), research suggests that there has been no decline in standards while others (Buckley 1993, Moens and de Lacey 1993, Connolly 1994) decry what they see as a fall in tertiary literacy standards. With that in mind, it is important to ascertain what those standards of literacy are.

METHODS

The questionnaire used in this survey was trialed in a pilot study at the University of Canberra before being distributed to all academic staff. Researchers at six other universities have joined the survey since that time but so far, results for only three other universities (University of Wollongong, Macquarie University and Flinders University) have been completed. The size of the sample is currently as follows:

Macquarie University	211	respondents	29%
University of Wollongong	283	"	48%
University of Canberra	260	"	22%
Flinders University	260	"	41%
TOTAL	867	"	35%

Three types of analyses on the results have been carried out to date but there will hopefully be further comparisons to be made at a later date from the information gathered.

RESULTS

So far, the following results have been collated and analyses carried out. Firstly, a comparison between the total responses for each of the four universities has been made; secondly responses for two Arts and two Science Faculties have been compared and thirdly, three Education Faculties have been examined for differences in response rates.

A Likert-type scale was used to obtain faculty opinions on nine major features of academic writing: Content, Argument, Style, Organisation, Use of Literature, Grammar, Communicative Ability, Vocabulary, and Punctuation. Faculty could choose L (Little or No Agreement), M (Moderate Agreement), S (Strong Agreement) or NA (Not Applicable) to statements about the nine features. Responses are shown as percentages and the analysis which follows generally focuses on how much strong agreement there was to statements in the questionnaire.

TOTAL RESPONSES

In the comparison between total responses for each university to the survey, all aspects of Content were found to be extremely important. Especially, faculty in all four universities strongly agreed with the importance of the following:

1) an understanding of the main concepts of the subject area under consideration,
2) the relevance of the content to the topic, and
3) how well the essay fulfils the requirements of the topic.

However, it must be said that faculty at Flinders University did not agree as strongly to the last of these (73% strong agreement) as did faculty at the other universities (all over 90%). There seems to be no apparent reason for this divergence of opinion.

The most important aspect of the argument according to faculty is the clarity with which the writer reveals his/her line of argument (all totals over 90%). Also of high importance is the writer's ability to show the connections between ideas (all totals over 80%). However, faculty do not appear to strongly object to writers going off onto tangents instead of pursuing one clear logical line of argument. It could be that faculty enjoy such originality and creativity in their students' writing, especially when it leads to a deeper analysis and understanding of the issues.

Attitudes to style show the greatest disparity in the survey. There appears to be very little agreement from faculty at any university as to whether such aspects of writing as formality, objectivity, impersonality, sentence length, repetition and sophistication are important or not. The only aspect on which there is agreement is that an appropriate style should be chosen for the topic or task (strong agreement over 60%). This confirmed the first study carried out at the University of Canberra (Bush 1994), in which faculty showed a surprising divergence in their attitudes to the traditional view of an "academic" style. It seems therefore that students need to tread warily when writing essays for a lecturer whose stylistic expectations they do not know.

In general, faculty show reasonably strong agreement that accurate grammar is important and likewise, that they are distracted by writing which includes poor grammatical construction. On the other hand, it appears that faculty do not expect students to use complex grammatical structures but are quite happy to accept more basic sentence patterns.

In terms of students' communicative ability, there seems to be a reasonable expectation from faculty that student writing should be easy to understand, but there is less emphasis placed on students to interest faculty with their ideas.

In terms of the organisation of student writing, faculty place the greatest importance on consistent referencing, with introductions and conclusions second in importance, and correct paragraphing third. On the other hand, faculty do not seem to be so concerned about whether students divide their writing into chapters or sections.

The most important aspect of vocabulary appeared to be accurate usage. Second in importance was the appropriate use of vocabulary; of far less importance was the necessity to use the specialised vocabulary of their subject area. It appears that faculty are concerned with clear communication, not with writing to impress or the overuse of jargon.

In using the literature, faculty place very strong emphasis on avoiding plagiarism (over 80% strong agreement). Other important aspects in this area are: the ability to grasp the main points of other writers, to analyse and synthesise and to quote accurately. However, there was far less emphasis on wide reading than was anticipated. Perhaps faculty are more concerned with reading selectively than reading material which is out of date, not highly acclaimed or of little relevance (see Bush 1994 and 1996).

Punctuation was not as important as other aspects of writing according to faculty responses.

Faculty were asked to rank order the nine major features of writing and there was very strong agreement among universities. The majority of faculty at all four universities placed Content (1), Argument (2), Communicative Ability (3) and Organisation (4). These are content features and were consistently ranked by faculty above form features (Grammar 6 or 7, Style 6 or 7, Vocabulary 8, and Punctuation 9). Use of Literature was fifth among all universities and forms the midpoint between content and form features and contains features of both content and form. It is a content feature in the way that writers use other writers' ideas within their writing and it is a form feature because there are "mechanical" rules as to how to include these ideas within the text. There was only slight variation as to which feature was placed (6) or (7) in the order of importance but otherwise all universities ranked the features in the same way.

ARTS/SCIENCE COMPARISON

The second analysis was an examination of whether there were different responses from Humanities and Science Faculties. This was more difficult to achieve as there was such a range of different Humanities and Science Faculties among the four universities; for example, some universities have general Humanities Faculties while others have specific Faculties eg Faculty of Arts. I therefore attempted to reduce the differences. Therefore, two universities with a specific Science and Humanities Faculty in each were chosen for comparison.

The Faculties of Communication and Applied Science at the University of Canberra and the Faculties of Arts and Science at the University of Wollongong were selected.

On aspects of Content, Argument, Grammar and Punctuation there were few discernible and consistent differences between Arts and Science faculty views. There were a few small differences nevertheless in other areas. Science faculty do seem to place more stress on objectivity in writing, which is to be expected considering the nature of scientific inquiry. They also place more emphasis on the need for academic writing to be easy to understand (clarity of expression). Thirdly, science faculty place less emphasis on appropriate vocabulary and more emphasis on accurate vocabulary than the humanities faculty. Possibly, the scientific background may lead to a philosophy which emphasises correctness, on being as accurate as is possible within the limitations. Lastly, science faculty are somewhat less concerned (under 70% strong agreement) about students *analysing what they read* than humanities lecturers (over 85% strong agreement). Perhaps they feel that scientific texts are less open to interpretation, but it is difficult to say whether this is the real reason.

EDUCATION FACULTIES

The third area of analysis was a comparison between three very similar Faculties in three of the universities. These were the Faculties of Education at University of Canberra (UC - 23 respondents), University of Wollongong (UW - 26 respondents) and Macquarie University (MU - 15 respondents). All have small staff numbers, but it was anticipated because of the nature of their discipline that they would exhibit strong tendencies to require high standards in both content and form features. This was certainly true in the area of Content where there were several instances of these lecturers giving 100% strong agreement to statements, especially to the statements which have previously been alluded to as important aspects of Content for faculty in the total responses.

However, in the area of Argument, differences began to appear between the three groups. On whether an argument should follow from the beginning to the end without tangents, UC lecturers showed 83% strong support while the other two universities exhibited less than 70% strong support. There seem to be no apparent reason for this divergence. UC Education lecturers were slightly more averse to repetition in writing than the other groups but on the other hand, were somewhat less concerned about grammatical accuracy and the correct use of punctuation.

UW lecturers gave much stronger support to the need for writing to show some sophistication (65% strong support) than the other two (less than 40% strong support); they also laid greater stress on correct paragraphing and dividing a text into chapters or sections. UW Education lecturers seemed to place more importance on students using the specialised vocabulary in their field and using it appropriately.

MU lecturers in Education seemed to be more distracted by poor grammar in student writing than the other two groups; in addition, they had a higher expectation that student writers would try to interest them in their ideas. They placed less stress on accurate quotation and less emphasis on the necessity for students to fully grasp the ideas of others.

In other words, considering that these faculty all teach in the same subject discipline, there is still quite a range of attitudes within and between universities. Even though we may say that there is more agreement than disagreement among these Education faculty members, there is still a fairly wide range of responses, limits to tolerance and standards of acceptability.

SUMMARY AND CONCLUSIONS

There is probably more agreement than disagreement exhibited among the responses to the academic writing survey. Faculty in all four universities consistently placed more emphasis on content features than form features. They also placed great stress on matters to do with intellectual property and plagiarism in the Use of Literature section and appeared to believe that reading and analysing the ideas of others is essential to academic work. Faculty also consistently ranked Content as the most important feature, with Argument, Communicative Ability and Organisation in descending order afterwards.

Aspects of academic writing which attracted the strongest agreement were as follows:

> Writing should show an understanding of the main concepts of the subject area.
>
> The content should be relevant to the topic.
>
> The assignment should fulfil the requirements as set out in the assignment topic.
>
> The line of argument should be clear to the reader.

An emphasis on these four aspects of writing in pre-tertiary, bridging and study skills course would no doubt be of great benefit to students. The message for EAP teachers in particular is that they should focus on the broader picture in students' writing, on content, ideas and arguing a case rather than on errors in form. Errors or micro-level skills are important, it would seem, but are less important than the macro-level skills of communicating ideas in a logical way.

The most surprising result was the divergence of views on academic style, with the only agreement being that the style should be appropriate to the task. Considering the divergence of responses, lecturers need to clearly state their requirements for academic style for the tasks which they set. Alternatively, students need to ask for these standards to be given explicitly before they submit their work. The message clearly is that faculty do not appear to agree now, if

they ever did, on what constitutes an academic style.

The differences discovered between the humanities and science area responses were minimal but science students should keep in mind that the scientific philosophy of accuracy and objectivity is expected to influence the way they write and think.

The comparison between the three Education Faculties was of interest in that there were a number of instances of differing response rates, which did not seem to follow a particular pattern. The message here is that students need to be aware that there are differences in expectations between universities and between individual academics and that they should learn to judge reader expectations as accurately as possible.

Audience or reader expectations are a crucial part of learning to become an insider in the academic discourse community and these expectations must be made as explicit as possible by academics. Those who teach academic literacy skills would also do well to ascertain the expectations of academics in their own universities.

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Teaching Difficulties Associated with Variability in Student Working Memory Capacity

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Working memory, conceived of as an arena of computation, has been implicated in accounting for variability in performance in a number of verbally weighted tertiary study areas. For example, variability in working memory capacity accounts for a significant proportion of the variability in comprehension, problem solving, and statistical and other reasoning tasks. This paper summarises some of the research findings in regard to the above, and discusses the implications for lecturers' management of the teaching of aspects of subjects where diversity in working memory capacity across students may provide difficulties in the communication of key concepts.

Working memory is a system that temporarily holds and manipulates information while we carry out cognitive tasks (Baddeley, 1992). It can be regarded as "an arena of computation" (Just & Carpenter, 1992). For example, for you to remember my office number (069 332248) in the period between reading the number and dialling the number requires a short term memory performance. However, for you to tell me my phone number with the digits in reverse order requires working memory, because this task demands that you hold the number in memory while you compute the order from right to left. Note that people who have very good short term memories do not necessarily have high capacity working memories, and vice versa. Variability in working memory capacity has been shown to account for a significant amount of the differences between people on tasks such as reading comprehension, verbal reasoning, problem solving, and statistical thinking.

I first review links between working memory capacity and performance on a range of cognitive tasks, concluding this section with a discussion of cognitive load. I then consider some of the implications of individual differences in working memory capacity for teaching, with attention being paid to aspects of tertiary literacy.

In this paper, tertiary literacy is conceived of as the ability to follow and communicate complex ideas and arguments, and includes the competency to deal with abstractions. As such, tertiary literacy in terms of its relevance to particular tertiary topics is arguably a continuum, touching every area of tertiary study, with some areas (e.g., philosophy) pertaining more to tertiary literacy

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than others (e.g., algebra). At one end of the continuum we have topics with a very heavy verbal component, while at the other end of the continuum the phrase tertiary literacy is almost a metaphor. Tertiary literacy as a goal is a life long task.

RESEARCH RELATING WORKING MEMORY TO COGNITIVE PERFORMANCES

WORKING MEMORY AND READING COMPREHENSION

Just and Carpenter, and their colleagues (e.g., Carpenter, Miyake, & Just, 1994, 1995; Daneman & Carpenter, 1980; Just & Carpenter, 1987, 1992; King & Just, 1991; Miyake, Carpenter, & Just, 1994; Miyake, Just, & Carpenter, 1994), have given working memory a key role in accounting for individual differences in reading related tasks, especially comprehension. Their research has relied in part on the use of a working memory span measure derived with the aid of a dual task methodology. This methodology requires subjects to perform two tasks concurrently, and yields a measure of an individual subject's working memory "span".

One span test, the reading span test designed by Daneman and Carpenter (1980), requires subjects to read a set of sentences while retaining the final word of each sentence for later recall. Only the sentence being read is visible to the reader. An individual's working memory capacity is defined as the size of the largest group of sentences for which a subject can correctly recall the final word of each sentence following the reading of the sentences. Thus, if the sentence block contained the following two sentences, "The versatile musician played a lively tune on his trumpet", and "The politician visited the town in order to open the new hospital", then first the subject has to read each sentence, and then, with the sentences out of sight, has to recall "trumpet" and "hospital".

Working memory span, as measured by the largest number of sentences which can be read and followed by the correct recall of the final word of each sentence, typically varies across university students from 2 to 5.5 (Just & Carpenter, 1992). The reading span measure, and a similar, listening span measure, correlate moderately (between .5 and .6) with results on the Verbal Aptitude Test, and highly (between .7 and .9) with answering comprehension questions (e.g., Daneman & Carpenter, 1980; Just & Carpenter, 1992). However, it is noteworthy that passive short term memory performance (e.g., recalling a list of unrelated words) does not correlate significantly with reading comprehension (e.g., Perfetti & Goldman, 1976).

It seems, however, that the dual task used to measure a working memory span need not be a predominantly reading task in order to predict reading comprehension level. Turner and Engle (1989) examined measures of ability to retain to-be-recalled words when the distracter task was verification of a numerical calculation rather than a reading task. For example, if the stimuli for one trial consisted of the following mental arithmetic problems and attached words, "[5

x 3] -8 = 7 wireless", and "[4 x 5] + 2 = 18 horse", then the successful participant would respond True on presentation of the first string, then False on presentation of the second string, and finally, recall "wireless" and "horse". Measures of working memory span obtained from this numerical operation task correlated almost as highly with reading comprehension measures as did reading span measures.

The position of Turner and Engle (1989) then, differing somewhat from that of Just and Carpenter (e.g., 1992), is that the span tasks used to assess working memory capacity measure a more general working memory factor than simply working memory for tasks related to the content domain of the working memory test. An important implication is that if the reading and other span tasks measure a general working memory capacity, then we may be able to use the results from almost any span test to predict performance on a range of cognitive tasks.

WORKING MEMORY CAPACITY AND REASONING/PROBLEM SOLVING PERFORMANCE

Recent studies have linked working memory capacity constraints with differential performance across subjects in problem solving and reasoning tasks. Carpenter, Just, and Shell (1990) have shown that level of performance on the Raven's Progressive Matrices test (Raven, 1965), a complex problem solving test, is associated with an ability to store intermediate goals. Kyllonen and Christal (1990) carried out four large factor analytic studies, involving a total of more than 2,000 military recruits, and found significant correlations between performance both on reasoning ability tests taken from the psychometric literature, and on working memory capacity tasks. Other reasoning researchers (e.g., Johnson-Laird, 1983; Rips, 1988; and Sternberg, 1988) have also invoked working memory constraints to account in part for subjects' difficulties on a range of reasoning tasks.

Casey (1993) made a detailed study of subjects' difficulties with a particular reasoning problem form, termed a double modifier problem. Here is an example of a double modifier problem.

> I show you a blurry photograph. I inform you that I have no brothers and sisters, and pointing to the photograph state, "That man's father is my father's son". Is the person in the photograph my grandfather, my father, myself, my son, or my grandson?
>
> (The solution is at the end of the paper.)

Such problems can be formed from any list of items that can be arranged linearly on some dimension. For example, "I am thinking of a number. The number before the number I'm thinking of is the number before 5. What number am I thinking of?" (The correct answer is 5.)

Casey hypothesised that both the failure of many subjects to correctly solve the problem form (some 60-70% usually failed), and especially the inability of some 30% of subjects to solve the problem form after training, may be accounted for

in part by constraints on working memory capacity. Casey (1994, 1995) reported finding significant correlations between working memory span and performance on such problems. He also found that subjects with a relatively low working memory capacity experienced more difficulty in learning how to solve such convoluted verbal problems than did subjects with a higher working memory capacity.

Casey (1994) also reported a significant correlation between working memory span and performance on another verbal problem, termed the transfer problem.

> Container A has white marbles, and container B has black marbles. I have a small scoop which when filled always holds the same number of marbles. A full scoop of the white marbles is transferred to the black marble container (B), and mixed in. Next, a full scoop of the mixture in B is transferred back to the white marble container (A).
>
> Are there now more white marbles in B than black marbles in A, the same, or the reverse? (The solution is at the end of the paper.)

Accuracy level on this problem across 1,600 subjects was 30%. Working memory spans were available for 100 participants, with the correlation between accuracy and WM span being highly significant ($r = .28$, highly significant for 100 participants).

STATISTICS

Variability across people in reasoning and decision making in the statistical area can also be related to differences between people in working memory capacity. Farry and Casey (1994), working with a group of 21 high school students, found a significant correlation between performance on a probability task and working memory capacity. Casey (1995) also found a significant correlation between working memory capacity and performance on a statistical decision making task in a group of 20 University students taking a research methods in psychology subject.

The findings for statistics are consistent with the literature reporting children's difficulties with arithmetic word problems. Arithmetic word problems are much more difficult than equivalent problems in a numeric format. Cummins, Kintsch, Reusser, and Weimer (1988) reported one type of arithmetic problem which was solved correctly by all first grade children, but for which only 29% were correct when it was presented in a word format. Carpenter, Corbitt, Kepner, Lindquist, and Reys (1980) found that children in the United States perform between 10% and 30% worse on arithmetic word problems relative to equivalent numeric problems. Cummins et al. noted that as students advance to relatively sophisticated topics, they continue to find word problems more difficult than those presented in a symbolic format.

In summary, results from correlational studies in the areas of reading comprehension, reasoning, and problem solving have shown significant links between working memory span and performance. The consistency with which

working memory capacity has been linked with performance across a range of cognitive tasks suggests that working memory capacity needs to be considered as a variable which may account for differential performance across students in a range of university subjects.

COGNITIVE LOAD AND THE WORK OF SWELLER

Sweller and his colleagues (Chandler & Sweller, 1991, 1992; Sweller, 1993; Sweller & Chandler, 1994; Sweller, Chandler, Tierney, & Cooper, 1990) have paid particular attention to the consequences for the learner of a high cognitive load being associated with the organisation and presentation of information.

Sweller and Chandler (1994) have targeted what they term "elemental interactivity" as a particular factor in determining cognitive load. They claim that "the cognitive load associated with material to be learned is strongly related to the extent to which the elements of that material interact with each other" (p. 188). For example, learning the vocabulary of a foreign language involves zero interactivity because the foreign language term for one word can be learned in isolation from the foreign language term for another word. The learning difficulty associated with acquiring the vocabulary of another language relates to the large number of words that need to be learned.

However, when learning the syntax of another language, the elements of information to be learned must be learned in relation to one another. Sweller and Chandler give the example of learning how to use in English the verb *to be*. Learning how to use the verb *to be* arguably requires the simultaneous learning of a complex of syntactic and semantic relations.

Sweller's cognitive load theory is detailed in several places (e.g., Sweller, 1993; Sweller & Chandler, 1994). It suffices here to note that he advocates reliance on our relatively powerful long term memory to circumvent the difficulties associated with limitations on working memory. Sweller argues for schema acquisition and automation as major learning mechanisms. For Sweller, "a schema is a construct that allows people to classify information according to the manner in which it will be used" (Sweller, 1993, p. 2). For example, the schema for the letter *b* allows us to read this letter in a near infinite variety of presentation styles. We have schema for all kinds of everyday activities, such as eating at a restaurant. We need schema to learn and to carry out skilled performances. Skilled performance also requires that many of the relevant activities be automatic. Thus, driving a car competently requires that the changing of gears be an automatic process.

The use of schemas and automatic processing reduce the load on working memory. A schema allows us to chunk elements of information into a single element, while automation provides a detour around working memory.

Sweller has presented evidence for some nonintuitve ideas in regard to teaching, such as not having computing equipment present when teaching certain aspects of computing because of the relatively heavy cognitive load in trying to deal with several items simultaneously.

IMPLICATIONS FOR TEACHING

The research shows that differences in performance on a range of cognitive tasks can be related in part to differences in working memory capacity. A key feature of many of the studies reported above is that they involve verbal material that must be held in memory while some relationships are manipulated. Note that not all tertiary studies place heavy demands on working memory capacity. Some areas are predominantly dependent on long term memory, such as multiple choice examinations in first year psychology. (Here I have consistently found no relationship between performance and working memory capacity.)

At the tertiary level there would seem to be many specific topics and broad areas where the teacher may need to be sensitive to the manner in which working memory capacity variation across individuals, or in some cases the very high cognitive load of the material, may provide difficulties in communication.

Working memory is likely to be stressed by any material which requires both a relatively high computational load and a concurrent memory load. Relevant academic tasks which might stress working memory would seem to include:

Taking notes in lectures;

Following statistical computations;

Grasping research methodology;

Any form of complex reasoning, including verbal problems;

Split attention tasks, such as working between notes and a computer.

Further, such tasks seem to fall under the umbrella of tertiary literacy.

If tertiary literacy is conceived of as the ability to follow and communicate complex ideas and arguments, and includes the competency to deal with abstractions, then difficulties in students' attaining one or another aspect of tertiary literacy may in part be associated with limits on working memory capacity.

What are teachers to do? Sweller (1993) proposes that teachers organise their instruction so that students do not have to use lengthy chains of reasoning, an exercise that will inevitably place strain on working memory. This is not to say that we accept that students will forever be incapable of lengthy chains of reasoning. Rather, the material needs to be organised so that it extends slightly already existing schemas. Teachers may well reply that this has been known for a long time. However, Sweller has shown that some teaching practices which seem intuitively correct at times, such as having a computer present when teaching computer applications, may have to be reexamined.

Teachers might also gain by having some knowledge of the working memory capacity of their students, and knowing which tasks are likely to be more difficult for students with a relatively low working memory capacity. Some form of test would be required, such as a reading or listening span test, or a backwards digit

span test. (The listening span test is the equivalent of the reading span test described earlier in this paper, with the distracter task being to write True or False to each of a block of statements, and after responding True or False to all statements in the block to write down the final word in each of the statements. Such a test can be administered to a group.) Students might profitably be grouped according to working memory for some tasks. This would not simply be grouping students on general ability because some of the top students in some subjects have relatively low working memory capacities.

A general approach to aiding the development of tertiary literacy is to attempt to introduce students early on in their tertiary studies to a range of skills necessary for performing at a high level in tertiary study, and arguably for education in today's world. Such an introduction is being carried out here at Charles Sturt University, Wagga Wagga, as part of the Bachelor of Arts program. All students now have to take two generic skills subjects, topics including a wide range of computer usage, and being able to reason critically. Of course the teaching of these subjects necessarily requires that the points made above on working memory limitations and cognitive load be noted and monitored. If aspects of these skills (e.g., computing, critical analysis) can become part of a student's repertoire of relatively automated skills, then the teaching and learning of many University level subjects may be made easier because the possession of these relatively automated skills will lessen the load on working memory. Thus, one aim of the generic skills subjects is to put students on the path to acquiring a range of skills relevant to tertiary literacy and tertiary education at an early stage of their University studies, thus possibly making easier the teaching and learning of many subjects which traditionally are very cognitively demanding.

CONCLUSION

The successful management of complex cognitive tasks relies to some extent on working memory. Areas of tertiary literacy arguably fall into the domain of complex cognitive tasks, and obstacles to the attaining of literacy in such areas may be related to working memory overload. Teachers may need to be sensitive to individual differences in working memory capacity, the cognitive load inherent in a task, and the cognitive demands of a particular teaching style in planning and executing teaching strategies.

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Solutions to problems in paper

Note that attempts to explain how to solve these problems can at times lead to heated argument.

1. The Brothers and Sisters Problem.

Here is one of several approaches. First, rewrite "that man's father is my father's son" as "that man's father is me". Next, rewrite the latter statement as "I am that man's father". Solve from here. If I am the father of "that man", then "that man" is my son.

2. The Marble Problem

The answer is that there is the same number of white marbles in the black container as black marbles in the white container. Consider the scoop on the way back from the black container to the white container. It contains a mixture of black and white marbles. Supposing there are x black marbles and y white marbles in the scoop. The x black marbles now going into the white container replace in the scoop the x white marbles that were left behind in the black container.

Peaks and Pitfalls of a Tertiary Communication Policy

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Since 1993 the University of Western Sydney, Macarthur has had a policy which states that all students commencing an undergraduate degree course must satisfy non credit competency requirements in computer literacy and communication skills. This discussion of the 'peaks' and 'pitfalls' of a tertiary communication competency policy represents the views of lecturers within the Learning Development Centre, just one of the stakeholders involved in the policy's implementation. At UWS Macarthur the Learning Development Centre is located within the Student Services Division.

Background

In 1991 the Chief Executive Officer, Professor David Barr established a Steering Committee and a Working Party within Macarthur to investigate how best to implement a mandatory competency policy. The impetus for the development of this policy was the concerns expressed by regional employers about the communication and computing skills of graduates. Although not involved in initial meetings, the Head of Students Services was later invited to join the Steering Committee and a member of the Learning Development Centre, the working party. At the time the Student Services Division became involved a variety of options were already being considered including a "Challenge Test' separate from courses and administered by the Student Services Division. This option was later to be firmly rejected.

Committee membership allowed the Student Services Division to affirm its commitment to several key principles including that communication competencies and their assessment be tied to relevant course content, that students should be notified as early as possible in their courses if they were thought to be at risk of not meeting competencies and that those students have access to free and readily available language and learning support. We also argued that since the acquisition of tertiary communication competencies was a developmental process, not a remedial one, credit courses should be considered as a support option.

The Minimum Communication Competency Policy, adopted by Academic

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Committee in 1991, stated that Faculties were to be responsible where possible for teaching and assessment and that the Student Services Division (through the LDC) was to provide safety net tuition. With the additional funding received the LDC was able to develop a workshop and self access program in which referred students attend, usually in vacation, a Faculty specific twenty hour workshop followed by ten to twelve hours of self access work monitored through individual appointments with lecturers in the Learning Development Centre. In 1995 around 150 students attended the workshop program. While most of these students were referred by Faculty lecturers, a small number of students self referred and voluntarily sought Faculty endorsement.

The provision of the communication competency safety net is just one of the support programs run by the LDC. In addition to this program the Learning Development Centre teaches credit communication based courses, responds to requests to run writing workshops in Faculty course time, organises and teaches several preparation programs and offers general workshops and individual appointments.

PEAKS

The introduction of the Communication Competency Policy has brought several positive outcomes, not least of which is the increased role of the LDC. Firstly, increased funding allowed the LDC to run more developmental programs ie the safety net program and courses for credit which we also see falling within our responsibilities under competencies. We are pleased the University is making a commitment that goes at least a little way beyond the 'band aid' approach that can result from poor funding. As Bizzell (1992, p 125) says "We ought not to pretend to give people access to this power by admitting them to college, and then prevent them from really attaining it by not admitting them into the academic discourse community".

Secondly, student success at university is increased and career prospects are enhanced. The development of academic communication is, of course, a process that continues all the time a student is at university and beyond. Therefore the role of the Learning Development Centre in providing a safety net program is only one of a variety of paths that should be open to students who are experiencing difficulty. Nevertheless, we feel that the thirty hour workshop and monitored self access program offered by the LDC does provide successful tuition at what is often a critical time for students at risk of failing or discontinuing.

Students are referred to Competency workshops for a variety of reasons and have different needs. While some are referred for lower-level needs such as problems in sentence-level grammar or conventions of citation, many are referred because of difficulties with higher-order competencies such as the ability to analyse sources, to reason and argue, and to write in a genre appropriate to the task. Because the range of needs is so great, the workshop and follow-up program could not be expected to make a very great impact on all students' performance. This is particularly true of referrals for problems in English expression or

grammar.

There is overwhelming evidence from studies of second language acquisition (eg Cummins 1984) that the 'interlanguage', or transitional language forms, of students learning in a second language are persistent and that it may take some years before their language approximates that of native speakers. This is particularly true of the development of academic registers of language, where students need to learn a grammar which, in comparison with spoken English, is more heavily nominalised, more abstract, more technical, and distinctively shaped by particular discourse communities (see for example Halliday and Martin, 1983).

With sufficient time, many students will learn the skills of academic communication which are being transmitted in each subject studied at the university. However, some of the processes, knowledge, skills and expectations of the disciplines frequently remain implicit because of the constraints of time or, possibly, because lecturers have not considered how the modes of communication of their subjects can best be explained. LDC programs (competency as well as other teaching subjects and workshops) attempt to make this knowledge more explicit.

The samples of student writing given in the short case studies below show that explicit instruction in the role of language in academic communication can lead to improvement in areas of need. It is worth noting that when asked for feedback, the students make the point that the workshops are most helpful in revealing previously unknown expectations, such as about essay structure, and the use of evidence, and in showing students how to meet those expectations.

Nikki is a student in first year of the Bachelor of Teaching (Early Childhood) Degree. Although born in Australia, she had lived in Greece between the ages of two and sixteen, speaking little English until she returned to Australia to be placed in Year 9. From here she continued through to Year 12 and university with little ESL support. In Greece she had performed very well in the Year 10 exams being placed in the top 5% of candidates. When Nikki was referred to the Learning Development Centre's program, she had already received a number of unsatisfactory grades and was in danger of failing the course. Samples from these assignments demonstrate that Nikki was a capable student who had not grasped the requirements of the genres in which she was writing. For example, in a report asking students to comment on accessibility for strollers or prams and to consider the implications, Nikki wrote

> How many times has one encountered the above obstacle whether the incident may have been an integral part of life either by coincidence or maybe because the person pushing the pram was none other than oneself.
> How many times ?
> A question of infinite meaning and responses, however as one undertook task b the focus questions and the centre of this discussion seemed to be profound. Why? What causes "this' delay. Who is at fault?

> Perhaps the person pushing the pram. Could it be possible ? Can it be possible "....."

Students not accustomed to tertiary expectations will often try to shape their writing according to the discourse conventions with which they are familiar. (Bartholomae cited in Bizzell, 1992, p165) In a follow up individual appointment Nikki explained that she was a fan of television dramas and had often been praised in English (literature) classes for her 'dramatic' writing style. In fact, as with many referred students, Nikki reported that she would not have sought help from the LDC had she not been referred because, after failing to identify any specific weaknesses in her writing herself, she had decided that she simply lacked the ability to pursue university study. While the marker of these assignments had made it clear that the writing was inappropriate with comments like " you are supposed to be analysing ... ", it was not until models were deconstructed in the workshop that Nikki was able to distinguish between her writing style and the conventions required by the lecturer.

Yasmin is from a Turkish background and grew up in rural NSW. Her father died when she was 15 and she left school to help her mother run the property. When she was 19 she undertook 2 years of TAFE studies and then married. Her husband is also Turkish and they now have two children. Yasmin is in her late twenties and has just completed the first year of a Bachelor of Social Science degree. Her extra-curricula reading tends to be in the area of popular texts of self-help psychology, alternative therapies and self-improvement. In first semester 1995, Yasmin gained good marks in her written assignments (eg 17/20, 13.5/16). They were fairly short essays which required interpretations of mainstream sociological theories . One essay, however, received a 'C' grade and drew the following comment from the lecturer: (The essay was on the application of social policy)

> There is ample amount of good material here and some impressive research but you haven't produced a strong well-structured clearly articulated argument. You should have been able to do so given the calibre of the material you have...some of the bits & pieces are not really relevant to the issue to hand even though interesting and important in themselves. You need to develop a much tighter and more explicit structure for your paper.

A comment on an essay that received 17/20 also included praise for the ideas contained in it but commented on lack of clarity of expression. The opening sentence of this essay reads:

> The study of sociology is an eye opener, although being very complex it is forever changing and this is how it differs from science.

Later in the essay, the student writes:

> In the western society marriage is thought to be a very natural occurrence which is supposed to increase people's happiness and

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> encourage harmonious interaction with man and women. This is generally not the case. People who had got married had the belief that marriages are made in heaven and they will live happily ever after as in the story of Cinderella who found her prince. Marriage does not promise happiness, love, sexual satisfaction and an escape from loneliness. The high cases of divorce in Western society show a realistic illusion of marriage.

The lecturer's comment on this paragraph, apart from a few suggestions for alternate vocabulary choices and the addition of a "therefore" was "There is a lot written about myth". Although the essay received a good mark, the student began to realise that the style of her written expression would have to become more academic and she would have to improve her essay structure if she were to meet the more stringent marking criteria of second semester.

In the second semester, Yasmin self-referred for competency assistance. She brought along the introduction to an essay discussing the effect of multiculturalism on Aboriginal people which read:

> The ideals that Australians and Governments signal what culture Australia embodies has not been equally expressed by the original inhabitants of this island. The ideology that is reflected in white society is one of a never ending search of materialistic possessions in order to make oneself happy. The term multiculturalism needs to be discerned from the good to the bad. There is a need to look into the past to document the original sources ... assimilation and integration, wherefrom multiculturalism grew. The main areas in this argument will examine the identities, equality, losses, effects, power, falseness, mistakes vices and misrepresentations of Aboriginal society. Large scale migration has included many benefits to immigrants but tipped the scales for the inhabitants, leaving them to walk on the darkside of life alone. Although this century has begun to open the locked cupboard of colonial history and face the truth about Australian roots. It is the Government that needs to accept and acknowledge what Aborigines stand for if they wish to call themselves Christians and rid themselves of ego.

After commencing the monitored self-access part of the competency program, Yasmin started to identify her own tendency to combine colloquialisms, cliches and rhetoric. She started to unpack the confused compression of ideas within sentences and reworked the essay, so the final version of the introductory paragraph read:

> Multiculturalism is a term that governments use to respond to the cultural diversity of contemporary Australia in the interest of the individual and society as a whole. This essay will concentrate on Aboriginal groups within a multicultural context. Aborigines experience of large scale migration started in 1788, it changed the Aboriginal's pattern of harmonious living. Prior to 1974, policies were adopted in an effort to assimilate immigrants and indigenous people

> into the Australian way of life but they failed. Today Multicultural policies are aimed at giving every Australian an opportunity to participate fully in Australian society. To all people, Multiculturalism is represented positively through the media and by Australian governments, but where its effects are negative, it needs to be examined. The positive effects suggests ideals of equality for all Australians, however, equality is not experienced by many of the original habitants of the island. In comparison to the overall population Aborigines are more disadvantaged from alienation unemployment, health and education. This essay will address the position power and equalities of the Aboriginal people in Australian society. The mainstreaming of multiculturalism, especially in young generations should lead to a greater degree of acceptance and contribute to equal conditions as time goes on. (This will allow aborigines to become a part of the collective group - the Australian society.)

In comparison with the first attempt, the writer has used this introduction to attempt to define its terms less dramatically and to make statements which represent a thesis position. Structurally, there is still much improvement to be made, but its register is becoming more academically appropriate.

The essay received 20/35. The lecturer's comments criticised the main assumption in the argument and some issues of content, but praised the essay as 'stimulating'. Yasmin attended the competency workshop program during the summer vacation and we will be monitoring her work in first semester 1996.

Tony is studying for a degree in Visual Arts and came to university straight from school after completing the HSC. Tony was born and educated in Australia, although his family are Croatian and the older members of the family do not speak English at home. The essays from which the following examples were extracted were each marked by the same lecturer. The student was referred to the competency program after submitting the essay from which the first example is taken:

> A examination of Paris society and art until the early twentieth century and beginning with the works of Manet as they represent the first adjoining of art reflective of the society their produced in, that of a modern life emerging? Mark Roskills statement is validated on the question of what is art history?
> Why was there a avant garde (art of our time, revolutionary and radical) approach to composition and the subject matter in art? Manets 'Luncheon on the Grass' was exhibited in Paris Salon des Refuses. It was refused in the Paris Salon of 1863. As it ignored the basic rules of composition, that line, form and colour were to be finished in order to create three dimensional space. Its refusal although was mainly due to these, description of 'Luncheon on the Grass' as 'indecent' and of Manet's 'Clymbia' also in the year of 1863 too lifelike for the time.

This sample was analysed by John Grierson, a lecturer in the LDC, and published in the Communication Competency Report (Grierson and Catterall, 1995).

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The second example is from an essay submitted after Tony had completed a competency workshop and was still attending the self-access component of the program. In comparison it shows a greater awareness of the purpose and structure of the introduction stage of the essay genre. The second text has a clearer thesis, it previews the argument of the essay more successfully, and, in avoiding questions, uses a more appropriate academic style. Note also in the second paragraph of the first text that the relationship between the 'topic' sentence - "Why was there a avant garde ... approach to composition and subject matter in art" and the remainder of the paragraph is rather unclear. The typically deductive style of essays in our culture requires the following kind of claim and elaboration: "The avant garde movement can be seen as a reaction to the constraints imposed by the Paris salon. These constraints are exemplified in the Salon's refusal in 1863 to exhibit Manet's 'Luncheon on the Grass'" etc. The second text shows more sophistication in paragraph and argument development.

> Australia and America adopted their respective landscapes, firstly as an symbolisation of national identity and secondly, as a symbolisation of God. These two would merge to form the identity of nation as God's own country. This reading of the landscape can be seen in the nineteenth century paintings of the respective countries. In Australia, the Heidelberg School which originated in the 1880s and lasted roughly to the 1980s would serve to represent the landscape in these terms. In America, the movement of luminism which originated in the 1850s would seek to do the same. The task of this essay is to show how the Australian film 'Crocodile Dundee' and the American film 'Dances with Wolves' reinforced the reading of the landscape first seen in the nineteenth century paintings.
> The landscape is read firstly as a symbol of national identity. The distinctive characteristics of both American and Australian landscape allowed it to become a symbol of their nation. The landscape to both countries represented a source of difference, which allowed them to construct an national identity based upon this. The illustration of how both Australia and America saw and used their distinctive landscape to represent national identity can be seen in the paintings produced by the Australian Heidelberg School and the American Luminism movement.

This example not only displays a more appropriate structure, it also demonstrates a greater awareness of how to order claims and signal the order to the reader. The word 'firstly' ('The landscape is read firstly as a symbol of national identity'), while apparently minor, is an important element of the logical structure of the argument.

The second essay shows a much keener awareness than the first of logical and persuasive paragraph development. The initial claim in paragraph 2 about reading landscape as symbolic of national identity is clearly developed through the simple device of lexical repetition, and through expansion by reference to the two schools. The second text also clearly signals that two or more claims will be developed.

Improvements shown in these three case studies can be attributed to explicit guidance by the competency tutor following analysis of student needs. As can be seen in the examples above, competency workshop and individual programs developed by the LDC must necessarily respond to the discourse requirements of different disciplines. One of the 'peaks' of our involvement in the Communication Policy has been the increased contact with different Faculties. Liaison with lecturers and students in order to collect samples of student assignment questions and text and to discuss assessment expectations has given us the opportunity to develop more Faculty-specific materials.

Furthermore, students who may otherwise not have sought the assistance of staff in the LDC have reacted positively to the help they have received in the programs. An evaluation report completed in 1995 revealed an overwhelmingly positive student response.

PITFALLS

Perhaps one of the most persistent problems associated with the communication competency requirements has been the uneven commitment of Faculties and their lecturing staff. This situation, exacerbated by the growing number of part time and casual staff, has resulted in great variance in the attention given in courses to the development of communication skills and in the frequency and number of referrals to the safety net program. In fact, inconsistency in approach and management of tasks related to competency requirements, including dissemination of information to staff and students, record keeping and notification of results, could potentially lead to the inequitable situation where a student may become aware that competency standards may not be being met too late for effective action.

While the competency requirements may have raised the profile of academic literacy and resulted in many lecturers seeking to increase their understanding and knowledge in this area, this effect has not been universal and some misunderstandings persist. Perhaps because some Faculties have located their competency assessment within a particular subject and also because of the 'separate' nature of the safety net program, some lecturers have tended to view the development of academic communication as a skill that can be learned in a finite period of time. Thus instead of viewing the development of academic writing as a process for which every lecturer should have responsibility, some see it only as the province of a particular subject or of writing specialists.

In the initial stages of policy implementation staff at the Learning Development Centre had a number of other concerns which, while regarded as potential pitfalls, have not eventuated. The decision not to fund the safety net program by levying Faculties per referred student relieved fears that economies may lead to some students being disadvantaged in the admission process or during their courses. In addition, much discussion initially centred around the fact that in undertaking to provide the safety net program, the LDC was, for this program, moving away from the completely voluntary and anonymous service that characterised many

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other services offered. However student referral by Faculty staff does not appear to have compromised the overall autonomous nature of LDC services and neither , as feared, do students seem to resent being referred. Evaluations have shown that the majority of students are very appreciative of the safety net service (Grierson and Catterall, 1995).

Although a university communication policy clearly needs sustained commitment at all levels to be effective, we believe the Communcation Competency policy at UWS Macarthur does address some of the issues related to concerns about tertiary literacy and has been at least partially successful in providing some solutions.

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The Teaching of Communication Skills in a Health Science Faculty

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This paper reports on a survey of current practices in the teaching of written and oral communication skills conducted in the Faculty of Health Sciences, Cumberland Campus, University of Sydney. Means of identifying students with problems (predominantly NESB school-leavers and mature age students) and possible causes are canvassed. More adequate screening of students before they enrol as well as early diagnosis after they begin study is advocated. Current policy in teaching of the skills and obstacles to the implementation of the policy are then discussed. This includes the processes whereby students with needs are helped and improvement in all students monitored. Several innovative approaches taken by various schools are explained: these include diagnostic essays, staff mentoring and peer assessment and tutoring.

Finally, recommendations are made for future development. It is concluded that since staff are not always trained in this area, they need expert support, such as is given already by the Language and Learning Unit, not only in helping the students at risk but also in training staff within the schools.

Background

The Academic Board of the University of Sydney has been concerned for a number of years with the development and assessment of communication skills as part of the learning outcomes of its students and in 1993 a working party of the University Language Board was set up to investigate the matter. The recommendations of the working party were subsequently adopted as policy by the University and the working party continued to work on the implementation of policy. In 1995, each faculty was asked to report on the teaching of written and oral communication skills in their area of responsibility.

The following is a report on a survey conducted by the Language and Learning Unit (LLU) for the Faculty of Health Sciences on the Cumberland campus. The Faculty consists of seven Schools: Communication Disorders (CD), Community Health (CH) which includes Rehabilitation Counselling (RC) and Aboriginal Health and Community Development, Health Information Management (HIM), Medical Radiation Technology (MRT), Occupational Therapy (OT), Orthoptics (O) and Physiotherapy (PT), and two Departments, Biomedical Sciences (Bio Sc) and Behavioural Sciences (Beh Sc) which service the Schools. Part of the Faculty of Nursing is situated on the campus but was not surveyed on this

occasion since that has been done by its own faculty.

The survey was limited for a number of reasons. Only coordinators of first year undergraduate studies were interviewed and the interviews were done at a very busy time of the year when examinations were in full swing. Some lecturers were too busy to be interviewed and gave written responses which it was not possible to follow up before the deadline. Some respondents who were interviewed were not happy with the research design; they felt that a written survey containing specific and more focussed questions followed by the interview/discussion would have been more useful and they found it difficult to respond fully in the unstructured interview/questionnaire (refer Appendix). Such a format was certainly the ideal but unfortunately time was too short to implement it.

This report, after a short discussion of what constitutes tertiary communication, will concentrate on three broad issues covered by the survey: barriers to effective practice, ways to overcome these barriers and a description of innovative schemes already in place within the Faculty. The report concludes with some recommendations for improvement in the teaching of communication skills.

INTRODUCTION

The transactional model of communication, rather than the merely interactive, best describes what happens in the Faculty of Health Sciences, especially in the clinical setting. Communication would seem to be more than a two-way exchange: we send and receive messages simultaneously and there are no isolated, discrete acts of communication. Rather, it is a relationship which is multifaceted. Teaching and learning are not to be seen as separate parts of the communication event in which the lecturer teaches, the student learns more or less effectively. The teaching and learning aspects of communication should each be considered as two-way; the student teaches and the teacher learns at the same time as the more traditional process is taking place. Again, feedback between lecturer and student ideally is an ongoing relationship in which behaviour is modified on both sides to improve the message. The relationship consists of far more than the rather narrow call for students to improve *their* communication skills.

Michael Jackson, in his response to the report of The 1994 Experience Questionnaire from the Graduate Careers Council of Australia (5/3/96), suggests that lecturers might consider how to communicate better with their students and how teaching might be improved. If students have to learn for themselves and not merely reproduce what the teacher has said, then stimulation and empowerment are needed (p. 17). Along similar lines, Garner suggests that communication is not a matter of *conveying* messages but of *constructing* them. Continuous, mutual interpretation determines the success of the communication. In the communication process the 'student' is as much a participant as the 'teacher': a new message is created from which both learn (1995, p. 21).

The Language Board, in their draft statement of principles, used DEET's definition of literacy. Both remedial and developmental needs of students are embraced in the definition of literacy as '... the ability to read and use written

information and to write appropriately, in a range of contexts. It is used to develop knowledge and understanding, to achieve personal growth and to function effectively in our society... Literacy involves the integration of speaking, listening and critical thinking with reading and writing.' (*Australia's language: The Australian language and literacy policy*, 1991, p. 9.) This definition incorporates the notion of oracy but the distinction between literacy and oracy is a valid one since some students have difficulty with one or the other and not necessarily with both. It seems that literacy is to be defined as the ability to communicate.

In response to the Higher Education Council Report entitled *Achieving Quality* in October 1992, many universities produced a description of desirable generic attributes of graduates. Those identified by the University of Sydney include, under the category of 'Knowledge Skills', the ability to 'identify, access, organise and communicate knowledge in both written and oral English'. This is the only reference to communication skills in the document. Clancy and Ballard in a recent article (1995, p. 159) have questioned the validity of the listing of such 'skills, attributes and values', because it 'inevitably encourages a fragmented curriculum and mechanistic approaches to teaching and learning.' Skills courses that are decontextualised from content are of little value in a university. Jackson (5/3/96) makes the same point. He comments that students must learn for themselves and therefore, special study materials, essay writing guides and remedial counselling are merely 'mechanistic responses to intellectual and social difficulties of intention, motivation, communication and beliefs' (p. 17).

The truth of these observations is confirmed in the findings of the Cumberland campus survey.

FINDINGS AND DISCUSSION

1. OBSTACLES TO PRACTICE AND WAYS TO OVERCOME THEM

a) Lack of standardised measurements of abilities

Most students with perceived problems were identified as Non-English speaking background (NESB), but not exclusively. The English-speaking background students (ESBs) with difficulties would seem to be mature age students who have come back to study after many years and their area of concern is usually writing, whereas NESBs have problems in oral communication as well. Younger ESBs - and, among these, males especially - have problems with oral communication because of shyness. But the main problem is in writing and the cause would seem to be that, like many NESBs, they have done mainly scientific subjects at school. Whereas school-based science relies heavily on multiple choice and short answer assessment, at the university even more science-based disciplines like MRT and PT require an increasing amount of writing. Therefore, although Tertiary Entrance Rankings (TERs) are in the mid 80's for MRT and the mid 90's for PT, many students are not 'up to standard'.

Communication Disorders specifically report that international students have problems because the course demands 'native speaker insights'. Similar problems

have not surfaced among migrants, probably because they do not see Speech Pathology as a career option at this stage, whereas international students plan to practice in their own countries in their own languages.

One solution is, to quote one respondent, 'to modify the TER to include compulsory English up to the standard which International Students have to have' (IELTS score of 6.5 at Sydney University). It remains to be seen if the inclusion of one unit of English in NSW HSC in 1995 will help. The expansive unstructured creative writing required in HSC English does not necessarily translate well to the rigorous writing required in Science subjects. Students with high IELTS/TOEFL scores going into PT, for example, have expressed anxiety about their ability to write 500 words of succinct prose on a highly technical subject. International students are given English language tests but their scores do not always indicate ability to cope with academic writing, especially of a scientific kind. For that reason, specific diagnostic tests linked to the discipline in which the student is to study would be more reliable.

b) Narrow criteria for some courses

Many lecturers believe that communication demands on students should be more explicitly stated in pre-enrolment literature. Course manuals are not given out until enrolment and there are only general comments about some subjects. When subjects are compulsory (and most are in First Year) obviously the advice needs to be in promotional material sent to secondary schools, etc. According to some respondents, the subject matter in some courses (such as Sociology) is difficult and outside the experience of many students; therefore they find it difficult to express themselves and since they do not have a choice, there is little that can be done before enrolment to prepare them.

c) Lack of early diagnosis of problems

Some Schools have formal procedures for identification of 'at-risk students'. MRT gives a diagnostic essay in Week 1 along with a lecture on writing skills. In other Schools there is a less formal process whereby weaker students are identified in tutorials in the first weeks. But many students are not identified until clinical practice in the mid-semester break or picked up in written exams at the end of semester 1 and then remediation begins in semester 2. This is obviously late but it is better than some situations when students do not know they are in trouble until they receive Show Cause letters in January of the next year.

A recent study of first-year university students found that, although inappropriate expectations were largely to blame for the problems which students experienced, there was clear evidence of the need for improved teaching which could be achieved by respecting two pedagogical principles: early and clear communication of expected outcomes and timely diagnostic feedback (Maslen, 1995, p. 10) .

d) Lack of timely feedback or any at all

Most Schools make early return of assignments a priority. Informal or formal annual reviews are common (eg. DT had a three-day session at the end of 1995).

But for one-semester subjects, the long-term view is difficult. Lecturers complain that there are too few hours to follow up weaker students. In some Bio subjects, there is no feedback at all since assessment consists entirely of a MCQ exam which is not returned.

A mix of assessments - including progressive lab tests - is preferable. As Paul Ramsden says (1990, pp. 67-8), the methods used to assess students are one of the most critical of all influences on their learning. If 'learning' is not aimed at understanding the subject but adapting behaviour to the requirements of lecturers, students are encouraged to adopt a surface approach which is hardly satisfactory from the university's point of view and is certainly not conducive to lifelong learning. Assessment also involves a dynamic form of communication. Proper assessment should reflect the quality of teaching as well as learning; lecturers learn from their students' experiences and modify the content and approaches of their teaching, as well as seeking to modify the practices of their students.

e) Lack of teachers skilled in teaching communication

In some Schools, such as Communication Disorders, all lecturers are experts in communication but some Departments have no one qualified and some have only two or three. In the scientific, as opposed to the vocational, subjects, this is understandable. Teachers of specific communication subjects (such as the 42 hour Communication subject in HIM) attend staff development seminars whenever possible and those who teach client-based skills try to keep up to date with current theory and practice.

This survey will hopefully raise awareness of the importance of communication skills and a description of innovative approaches already in use in the Faculty may induce lecturers who feel their inadequacies in this area to contact their more experienced colleagues. A workshop was suggested but that proved very difficult to arrange at a time suitable to all. More lecturers may avail themselves of university-wide seminars and workshops, however. Other suggestions included a generic resource kit, with instructor's and participants' manual. This is probably of limited usefulness, as already indicated, if it is divorced, as it inevitably would be, from discipline-specific content.

2. INNOVATIVE SCHEMES ALREADY IN PLACE

Along with usual assessments (essays, oral presentations) there are less traditional forms of evaluation: writings of memos and reports, group work, role plays, impromptu speeches, minute papers, vivas, videos, peer teaching. I would like to highlight several schemes already in place in the Faculty:

a) A diagnostic essay for First Year MRT students (160 in 1996) is planned and marked in conjunction with LLU. The topic (no choice) and marking criteria are given out in week 1 and lectures on writing skills are given in two two-hour sessions in weeks 1 and 2 by tutors from LLU. No grade is given but extensive feedback is passed on and students identified as 'at-risk' are encouraged to visit LLU on an ongoing basis. Two further (assessed) essays are given, one in each semester for which a similar format is required.

b) A mentoring system. Each lecturer is allocated 5-6 students who have to see their mentor at least once in the first 5 weeks, and thereafter voluntarily. A fairly small proportion, perhaps 2-3 out of those 5-6, will continue the relationship. The most commonly discussed issues last year, after administrative concerns such as changing courses, were problems in writing essays and clinical communication. The scheme is being continued this year because it is valuable for lecturers in early identification of problems especially in oral communication.

c) Topics in PT I and II. These two subjects, conducted in the first two years of the undergraduate course, aim to address academic and current/future workplace needs of PT students, who need to be able to act autonomously as learners and professionals and yet also be increasingly accountable to their employers, colleagues and patients (Bridger, 1994). TOP 1 (in Semester 1) has two topic areas, namely the Australian Health Care System and Teaching and Learning Skills. The subjects address both content (that is, clinical/academic contexts) and process (that is, how one learns). The focus of this module is 'setting the scene' and aims to give students an introduction to, for example, concepts of 'being a professional', group theory and practice and giving and receiving constructive feedback. The study skills component is given less emphasis in the teaching and learning module to make the tutorial content appear less remedial and more like a cooperative learning group. Content areas are integrated into communication skills and academic literacy and oracy, so the subject appears relevant to students' needs.

In the first semester of second year, staff from the School of Behavioural Science give lectures on Social Interaction, Communication and Personality. The module aims to have students understand interaction dynamics, concentrating on aspects of, for example, social influence, leadership styles, persuasion techniques, interpersonal skills and grief management. In the second semester of second year, the combined themes of communication and ethics are used to develop 'awareness of self and others', helping students, for example, in identifying and understanding the implications of potential mismatches in needs/expectations between PT and Patient, identifying communication barriers, developing observation skills and understanding 'awareness' models as well as clinical models in a professional context.

d) Peer assessment and tutoring in Occupational Therapy. The written assignment (which this year is a review of a book or video about an individual's experience of disability and the relationship to concepts underlying OT practice) is marked by the students themselves, then by their peers, finally by the tutors. A Policy and Procedures Manual, written by the OT School, which includes a 16 page writing guide (perhaps too long?) is provided free to all first year students. Students are asked to complete their assignment early and to hand it to a member of their tutorial group. This person has three days to read the essay, correct any referencing errors and check if all the information needed is included. The students then have a week to make any necessary changes on the basis of the feedback provided by their fellows. The educational principle behind this is the fact that it is a valuable mechanism for improving both technical ability and

critical appraisal skills, reduces stress on students who fear singly-evaluated courses and makes feedback more immediate. Behind it, too, is the wish to demonstrate to students that they do not have to work exclusively on their own.

There was peer tutoring in OT of first year students by third year students in 1995, and also this year of second years by other second years. The latter is highly structured and with lower expectations. The tutors are self-selected: Honours students get credit towards their fieldwork while Pass students do it for the experience. Tutors and tutored both go to the lectures and are given structured outlines of readings and questions. The sessions are not remedial; their aim is to stimulate discussion and bring field work experience to students who speak the same language. Third Years learn to communicate the knowledge without the use of jargon and they build relationships across the years. An evaluation carried out at the end of last year by the Centre for Teaching and Learning found that those involved wanted the program to continue and develop.

f) In several Schools there are efforts to develop critical thinking among students using the tutorial format. HIM has instituted a very successful 'Journal Club' in semester 2 of first year. Students are 'expected to lead one small group discussion on a professional issue, participate in small group discussions, apply principles of small group work to enhance the functioning of the group, listen actively at all times and document a critical analysis on one professional issue'. The insights gained will be used in constructing similar programs for other undergraduate years and even postgraduate courses.

MRT will introduce the critiquing of journal articles in 1996 as will Sociology (discussion of selected readings of articles will replace oral presentations). The tutorial format will not only encourage critical thinking but also provoke debate and ensure that the shyest students talk.

g) Many Schools have introduced reflective journals in which students maintain a dialogue with their teachers on their ways of learning and barriers to success. Some lecturers ask for a letter of 1,000-2,000 words as well as a 2-5 minutes presentation from the students telling their 'story about their reading'. The value of this is not only that students identify their own learning styles and problem areas but also lecturers can enter into dialogue with students and identify potential barriers to learning.

RECOMMENDATIONS

Communication skills teaching would be improved if all staff followed the example of the majority of their colleagues and implemented the following:

1. Attending staff development seminars for those lecturers who need information and support (these are of limited usefulness because of time constraints but they certainly need to be on Cumberland campus).

2. Seeking support from LLU: for staff, in team-teaching; for students, in group and individual tutorials.

3. Using diagnostic tests and/or mentoring, whether formally or informally, to identify as early as possible students who may have problems. (An example of an easily administered test is the 'minute paper' used in the PT School. At the end of the class, students write down on a sheet of paper brief answers to two questions: 'What is the big point you learned in class today? What is the main, unanswered question you leave class with today?' Students drop their papers in a box near the door for the teacher to read after class).

4. Allowing various forms of assessments to take account of the different ways in which students learn and which also reflect the objectives of the subject, and certainly ones in which immediate feedback can be given. Perhaps reflective journals could be included in more course requirements.

CONCLUSION

It would appear that most schools in the Faculty of Health Sciences are observing the golden rules of early diagnosis of students with difficulties and prompt feedback on student assessment. There is also evidence that academic staff are very sensitive to feedback *from* students in modifying courses and improving their overall teaching.

Probably because of its strong emphasis on professional and vocational education in the Faculty of Health Sciences, on Cumberland Campus of the University of Sydney, a great awareness of the need to teach communication skills well is demonstrated although gaps still exist in the implementation of policy. Departments who service Schools obviously do not need to provide the same type of teaching but their staff are conscious of the deficiencies in their programs. It is hoped that the highlighting of innovative approaches used by a significant number of staff in the Schools will encourage an exchange of ideas not only within Schools on the campus but further afield.

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APPENDIX: COMMUNICATION SKILLS SURVEY QUESTIONNAIRE

1. Do students entering your faculty's programs have adequate pre-requisite commun-ication skills to **commence** these programs?

2a. In developing and describing programs and courses, i) are the communication demands made on students, and the means of developing and assessing communication skills explicitly stated? ii) is there a process for identification of students who do not have adequate pre-requisite communication skills?

2b. In evaluating the effectiveness of programs and courses, is there a process for determining whether students have achieved learning gains in their communication skills, and for reviewing program design and delivery in response to such evaluations?

3a. In undertaking programs and courses, i) are students required to engage in learning activities demanding communication skills; ii) are the communication skills explicitly taught within the programs and courses; iii) are the activities sequenced to make progressively greater demands on students' communication skills?

3b. Are induction programs provided to assist students from other cultures in making the transition to new styles of learning and communicating?

4. Do assessment criteria reflect the communication skills outcomes of programs and courses? Are these criteria stated and explained in student prior to their undertaking tasks for assessment? Is timely feedback provided to students on their progressive development of communication skills, and opportunities provided for students to improve their performance in subsequent tasks?

5a. Are students advised adequately about the communication demands of programs and courses, prior to and during their candidature, about the degree

to which they are meeting these communication demands within the context of their study?

5b. Are processes in place for supporting students who are not meeting the communication demands of programs and courses?

6. Are there any staff within your school/dept with expertise and experience in teaching communication skills? What are their approaches to developing and assessing communication skills in their students?

7. On which aspects of students' communication skills does your faculty need more information?

8. Are additional resources needed by your faculty to support implementation of the communication skills policy?

9. What special innovative approach(es) being undertaken by your Faculty to improve students' communication skills would you like to highlight?

The Development of Information Literacy in Undergraduate Programs

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Educators of tertiary students are beginning to help them take charge of their own learning by improving levels of information literacy. Information literacy is defined here as a multi-stage process for finding and using information that is underlaid by a range of skills including intellectual, study, library and computer. In combination these are a set of skills that can be described as information skills. The research reported here sought to identify new entry students' perceptions of the information skills they need to succeed in their study. The results showed that there was a strong recognition of a need for information skills instruction but an uncertain understanding of how this should be delivered. This indicates that tertiary educators should examine the possibility that the level of information literacy may be improved through the teaching of these skills within specific learning contexts in the student's programs. An example of where this has been applied in an undergraduate program is discussed.

The arrival of the 'information age' has presented a challenging invitation to the educational community at all levels. Increases in amounts of information available and the range of new technology available to both professionals as intermediaries and to end-users to store, access and manage that information have meant a new response to academic programs and their content is needed. At the same time within education there has been a transition from a teaching model to a learning model and with this change comes a concern with information literacy. Information literacy is seen as a survival skill in this information age. 'Instead of drowning in the abundance of information that floods their lives, information literate people know how to find, evaluate, and use information effectively to solve a particular problem or make a decision...' (Breivik, c1989)

At the tertiary level students have in the past relied on their teachers for knowledge and on the skills of librarians for locating and retrieving needed information. When the volume of knowledge was relatively compact and the increase was slow they could manage with a basic level of information literacy. The

information explosion has turned what was a minor problem into a crucial problem as content changes so fast in some fields that it is difficult to remain 'experts'. To address this problem a new educational philosophy is needed that is based on a redefinition of literacy that includes information skills so that the student can take charge of their own immediate learning and develop skills for lifelong learning. As expressed by one researcher, 'The information literate are those who have learned how to learn. They know how to learn because they know how knowledge is organised, how to find information...' (Bruce, 1990 p.226)

Information literacy then encompasses the philosophy of giving students skills in using information so that they can be successful in their studies and continue their learning lifelong. Information skills as a concept then has several facets. These include: library skills, study skills, cognitive skills, and additional skills such as planning and presenting information. A process which has these facets organised into a logical order was developed by the NSW Department of Education and has been introduced into NSW schools. It has six steps: defining, locating, selecting, evaluating, organising, and presenting information at the appropriate level for the task.

These steps are a systematic approach to information problem-solving using six broad skill areas. The process is based on a critical thinking approach and has evaluation built in at various levels including the explicit level of evaluating information resources.

The majority of information literacy teaching and writing within the tertiary field was normative based on educators' and librarians' perceptions of what students needed to be taught. For example there was (and is) a large literature in the field of librarianship dealing with ideas of 'reader education' based on students (or other library users) approaching the library 'system' and needing to understand all its workings to be able to find the information they needed. Recent work from the British Library Research and Development Department (Cowley, 1990; Morrison, 1992; Markless, 1992), although broader in context than earlier works from libraries, is still very much based on the idea of a student approaching and needing to be taught about a large information system.

Taking both the lifelong learning philosophy and the user perspective into account the authors investigated what new entry tertiary students perceived they needed to succeed in their study (Coombs & Houghton, 1995). The user perspective is the accepted paradigm within the Department of Information Studies and demands that the needs of users be clearly identified before services and products are developed rather than the service/product supplier simply determining what they can provide or making assumptions about user needs.

Students were presented with a questionnaire asking about:

- previous interactions with a library and instruction in information skills
- perceptions of their ability to use various library services and resources when they entered university
- perceptions of the level of ability needed to use various library resources

and services to be successful in their study programs
- preferences for types of instruction in information skills.

The findings indicated that all of the students (188 first year B App Sci) had a basic awareness of information skills and that libraries were a complex system of organisation of resources and knowledge. Their perceptions of their own abilities with a range of information tools, resources and services were generally high. However, some anomalies and indecision lead us to believe that some information systems and/or resources had never been identified to them in our/ library 'jargon'. They were indecisive about the type of instruction that they needed but generally agreed they needed it. The methods offered were based on traditional library methods and were separated from other learning experiences happening.

They perceived that they needed strong information skills to succeed. If students are to be offered these skills then tertiary educators need to take on a new role. This role is either of understanding and teaching information skills themselves within their discipline, or cooperating with special educators, that is those in Universities who have specific responsibilities for learning and teaching (for example, the Centre for Learning and Teaching in UTS), so as to have information skills taught in conjunction with other subject content.

Traditionally information skills have been taught separately and divided into well known categories of:

study skills
library skills
communication skills including writing skills
intellectual skills.

All of these have been taught by different people with different disciplinary backgrounds, different purposes, and with no coherent framework.

This traditional, separated approach is beginning to change. Literature in recent years indicates that educators are seeing the value of a consistent and logical approach. Because of this the concept of information literacy is gradually being developed by educators and librarians. Some of the most recent writers to use the concept in the broad based way described here are Eisenberg & Berkowitz (1990), Cheek et al (1995), Farmer & Mech (1992). Mike Eisenberg's work in particular with his 'The Big Six Skills' can be closely identified with the six steps described above and the differences are in labelling rather than conceptual.

From our research it appears that the ideal is for information skills to be taught within the context of each subject so that students understand the level of skill needed and the types of resources needed for the task set. This will involve working with information professionals and with learning professionals in learning centres to develop strategies within the discipline and within each subject. Then students will gradually and logically develop an overall high level of information skills to use after graduation as well as to succeed in immediate study. As this is a process that will take time to evolve, as a beginning a full

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semester subject (Communication and Information Skills) has been developed based on the Information Skills process described earlier and was first offered in 1993.

It begins with some basic study skills (time management, note taking, etc, and understanding the university culture) and then moves into topic definition, locating information (categories of information resources and their organisation), selecting information (models of the search process, how indexing and abstracting services work), evaluating information (evaluation models), organising information (analysis and synthesis, argumentation, persuasion, critical thinking), presenting information (report and essay writing, oral presentation). The assignments are set to measure the level of skill they have achieved in researching a topic, which encompasses the first four parts of the process, in oral presentation and in written presentation in the form of an essay.

Although the students have been observed to have a positive attitude about the content, one major difficulty is that there is such a wealth of resource material and search strategies to introduce to the students that the real need is for the subject to have a much longer teaching period. Although they are able to select any topic they are interested in to locate, select, and evaluate resources for within fairly broad assignment guidelines they often can not relate their learning directly to other subject assignments. Every effort is made to help them do this and in some instances resources related to a specific disciplinary area are introduced. Observation and anecdotal evidence from teachers has suggested that the standard of oral presentation in particular has improved in subjects following the introduction of Communication and Information Skills.

The subject is constantly undergoing review and modification and the trend has been to extend the steps relating to analysing, synthesising and organising information. That is, to be able to identify the intellectual processes and use them to present coherent arguments and also to recognise and use critical thinking and persuasion methods. The other learning area which has been extended is the essential one related to how new knowledge is disseminated through journals and other periodicals and the methods of accessing this knowledge using indexes and abstracts. This part of the search process is still complex even though electronic products, such as full text databases, have simplified some of the steps. More investigation of the outcomes of the subject will be needed before any major changes are undertaken. The next step to integrate the teaching of information skills across the curriculum will take much longer but remains the challenge.

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Critical Practice and Undergraduate Students

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This paper reports on the findings of a two year multidisciplinary research project on the nature of critical practice across six discipline areas - undertaken at the University of Western Sydney, Nepean in response to student demand. It appeared that many faculties expected students to 'critically analyse or evaluate' but few offered information for students on how to do this. The aim of the project was to describe and analyse the ways in which expectations of critical practice varied within and across faculties. While noting the widely varied requirements to satisfy faculty expectations, the project team were surprised by the uniformity of critical practice demands on students within the university. The final outcome of the research project was the publication of a book *Critical Analysis- What is it ?* which contains multiple, annotated ' model ' essays and assignments from six faculties at UWS Nepean. The book consists of separate faculty entries containing the 'model' texts which have been annotated with both lecturer and students comments and discussion on major themes and issues raised either by lecturers or students within that faculty.

Introduction

Among many academics at universities worldwide there is currently a degree of disquiet regarding the quality of students' oral and written assignments (eg Australia: Ramsden 1993, Cope & Kalantzis 1995, Luke, A & C. Luke 1995; UK: Langshear 1994, Wallace 1992; USA: Kurfiss 1988). One area of concern is students' inability to think and write critically. At the University of Western Sydney Nepean, faculties are attempting to redress this issue.

The focus of the critical thinking research project titled 'Critical analysis for undergraduates - unmasking the process' is to examine critical practice from two perspectives: students' current critical practice and the critical practice needs of undergraduate students. Both areas are supported by a wide range of

contemporary papers and research projects (Ramsden 1988, 1993; Clanchy & Ballard 1989, Biggs 1989). The research project at Nepean was in part a response to the University's diverse student population. In 1994, the results of the Student Intake Survey showed that 25% of commencing students enrolled in undergraduate programs gained entry on the basis of mature age status, 38% identified themselves as speaking a language other than English at home, and 49% identified themselves as being first generation university students.

A particular concern to the researchers involved in this project was to uncover for students conflicting and/or implicit discourses about what constitutes 'successful' critical practice. The project was concerned with describing some student and some staff understandings of critical analysis within particular contexts. In doing so, it is intended that the project will make explicit for students a range of meanings for critical practice which are valued within this university. Just as importantly it is hoped that by showing some of the similarities and diversities of critical practices, both students and staff will be able to step back from their present understandings of critical practice and view those understandings analytically (James & Scoufis 1995).

Forty student assignments or essays which lecturers judged as demonstrating critical practice were collected from a variety of faculties across Nepean Campuses. Both the writer of the assignment and the lecturer who promoted the assignment as exhibiting features of critical practice were interviewed to uncover the components of critical practice valued by the student and by academic staff. A further focus of the project team was to make explicit some of the processes the students go through in order to produce their texts. A book, entitled *Critical analysis - What is it?* which contains both student and academic interviews, annotated assignments as well as emergent themes relating to expectations of critical practice has been produced.

PROJECT AIMS

A purpose of this project is to make explicit the nature of the unspoken processes of learning thus ensuring that the courses taught by the participants do not perpetuate privilege and thus exclude certain groups of students. The research project aims not only to benefit the student body but also academics as well as the university in achieving its access, equity and quality assurance goals. Specifically the project aims to

- generate a profile of critical analysis/practice as evidenced in student assignments within the University of Western Sydney, Nepean
- analyse and describe the ways in which different faculties approach critical practice
- initiate discussion and debate within the university about the teaching and learning of critical practice
- evaluate the effectiveness of using students' assignments to analyse/teach/learn undergraduate critical practice.

DEFINITIONS

Postman (1987, cited in Bailey 1992) in a discussion on the power of the written word as opposed to other forms of media argues that

> the written word means to follow a line of thought, which requires considerable powers of classifying, inference-making and reasoning. It means to uncover lies, confusions and over generalisations, to detect abuses of logic and commonsense. It also means to weigh ideas, to compare and contrast assertions, to connect one generalisation to another.

A broad definition of critical thinking is provided by Hagar & Kaye (1992): 'Critical thinking is reasonable reflective thinking that is focused on deciding what to believe or do' (p.26). In a similar vein Kurfiss states that

> Critical thinking is an investigation whose purpose is to explore a situation, phenomenon, question or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that therefore can be convincingly justified. (Kurfiss 1988, p.2)

Schlick (1992) too has a holistic view of critical thinking and says that critical thinking is essential for problem solving and decision making. Schlick's definition reflects a work place approach to critical thinking and practice. Critical thinking is seen as essential for problem prevention, effective teamwork and empowerment. The process involves not only 'sharpening the thinking skills of workers but also involves providing a context wherein workers want to and can succeed' (p.18).

For Lankshear (1994), being critical requires that the student knows and values the 'canon' in her/his discipline first - 'there is the requirement of knowing closely ... that which is being evaluated' as well as 'judging, comparing, or evaluating on the basis of careful analysis' (p.9). To define the analytical aspect of critical literacy, Lankshear utilises Shor's (1993) definition

> analytic habits of thinking, reading, writing, speaking, or discussing ... go beneath surface impressions, traditional myths, mere opinions, and routine cliches; [it is] understanding the social contexts and consequences of any subject matter; discovering the deep meaning of any event, text technique, process, object, statement, image, or situation; [and] applying that meaning to your own context. (Lankshear 1994, p.9)

Academic research into critical thinking identifies an ongoing debate about the definition and nature of critical thinking. One prominent aspect of this debate, for example, is the relative transferability of such thinking skills. A significant split has emerged between the field-specific school of critical thinking, most notably associated with McPeck (1990), and the generalisability school, associated with Ennis (1987, in Baron & Sternberg 1987), among others. This suggests that students may (or may not) be able to apply or transfer the critical thinking skills acquired within one discipline to another. Hager & Kaye (1992) and Hager (1992) provide an excellent Australian-based review of this debate and other

uncertainties within the research. Their conclusions suggest that there is still much to be done in resolving the debate and applying its deliberations to the university learning context (Craigie, James & Spolc 1995). Toulmin (1958, cited in Hager 1992) had earlier taken a consensus position claiming that broad similarities exist between 'arguments in different fields, both in the major phases of the argument ... and in their micro-structure' (p.5). Toulmin also holds that aspects of critical processes such as judgement and criticism vary with the field but that the universals are transferable from generic to particular fields (Hager 1992). Hager (1992) concludes 'While it is generally agreed that generic critical thinking skills are not, by themselves, sufficient for critical thinking in a given context, the extent to which they are necessary remains an open question' (p.14).

Jackson (1995), working in Australia advocates seven competencies to achieve a '[self] critical attitude'. He claims these competencies need to be developed simultaneously rather than sequentially. The 'core' aspects of developing a critical attitude are access to existing information, command of that knowledge, the ability to criticise existing knowledge, exploration of knowledge/issues, creation of new knowledge, identifying ethical dimensions of a problem/issue, and finally, the ability to work as part of a group. Jackson then suggests that there are additional special competences in any discipline.

Cope & Kalantzis (1995) claim that four central learning activities need to be provided for all students namely 'situated practice', 'overt instruction', 'cultural framing' and finally 'transformed practice' (p7). Situated practice involves the student in an 'immersion in the appropriate discourse of the discipline; overt instruction requires a thorough, systematic, analytical exploration of the topic. The third learning activity, cultural framing, requires the social and cultural explication of texts so that cultural practices are contextualised and when appropriate, criticised. This is perhaps best achieved by the book produced as outcome of this Research Project. The final activity, transformed practice, allows the student to put 'the meaning making practice ... the transformed meaning, redesigned meaning to work in other contexts or cultural sites' (p.7). While these four activities are vital for all students they are even more important for Language Background Other Than English (LBOE) students since they clarify for the LBOE students the local academic, social and cultural conventions.

The demands faced by students in becoming competent in critical literacy are twofold: not only are students expected to be conversant with the term but are expected to put into practice the process that it represents (Meyers 1987) often without any overt teaching about this very exacting academic process.

MODELLING

Modelling is generally accepted to be a facilitating process and implements for students the four central learning activities of Cope & Kalantzis (1995). While not supporting 'one best way', modelling draws students' attention to the particular requirements of a discipline area and draws together knowledge and content. The provision of multiple successful models as occurs in the book *Critical*

Analysis - What is it? allows students to experiment, and to examine or adapt present practices in relation to models provided. The advantage of using models is that it allows the lecturer to demonstrate expectations and the process of argumentation in the academic context (Luke 1995). The explication of these learning approaches for students aims to enhance student learning since 'being aware of our cognitive processes and exerting control over them' can optimise performance (Biggs 1988, p.127). This theory of metacognition is generally acknowledged within the university ie students learn best by interacting with knowledge which results in different ways of learning (Crebin 1994). It is also generally accepted that the manner in which students approach a task determines the quality of the outcome (Ramsden 1993). A study by Li and Body (1993, cited in Bain, Lietzow & Ross, 1994) at Deakin University in relation to metacognition found that 'students... thinking about their learning improved learning outcomes as an awareness of their learning process developed' (p.41). Thus the use of models becomes justifiable on the grounds of justice and equity.

Modelling and a newer strategy Supplemental Instruction being implemented within a number of Australian Universities, are responses to the needs of the student body. Supplemental Instruction (SI) was developed in the US by Deanna C. Martin at the University of Missouri at Kansas City in 1973. It is an 'academic assistance program that increases student performance and retention. The SI program targets traditionally difficult academic courses - those that have a high percentage rate of D or F grades and withdrawals - and provides regularly scheduled, out of class, peer facilitated sessions. SI does not identify high risk students, but rather high risk courses' (The University of Missouri- Kansas City: Centre for Academic Development advertising data, n.d.) . It is foreseeable that the SI program could be adapted to support students working to enhance their critical analysis skills.

Australian universities have a diverse student body with a diverse range of strengths and weaknesses reflecting the range of entry methods namely full fee paying International students, adult entry, and artistic merit among other groups. For each of these groups of students, concepts and practices valued by the faculty teaching staff may need to be explicitly taught and then reinforced by 'recycling constantly in a variety of contexts to enable students to grasp thoroughly and develop flexibility of application' (Achen, 1991, p.34). Thus, some students need to be taught particular skills to maximise their opportunities to participate and complete courses. In addition, existing support programs and services need careful monitoring to ensure that the needs of 'at risk' students are met.

Both university administrations and faculty leaders at least tacitly acknowledge these issues. Bowen (1994), however argues that 'the real barriers to participation in higher education by disadvantaged persons might not be access or support, but *what* is taught in university courses, and *how* it is taught' (p.22, italics in original). Thus in the shift away from 'elite' to 'mass' education and the flexible entry provisions of most universities, it is now important for university teachers to make explicit expectations and practices that once may have been left implicit (Knight 1994).

ACTION RESEARCH

Research has many facets of which action research is one legitimate model. Scientific methods of research are seen to be an objective examination of 'technical' issues (Carr & Kemmis 1986). Habermas (1970, cited in Carr & Kemmis 1989), claims that scientific methodology whose focus is on technical knowledge is not best suited to research in the social sciences. A critical social science for Habermas is a social process which combines collaboration and democratic participation. In an educational setting this would include students, teachers and any interested community members.

METHODOLOGY

PHASE 1

This phase involved forming a cross-faculty team and gaining internal funding. During this period the project team, the Writing and Thinking Network, decided to produce a book of 'model' assignments which would demonstrate effective critical practice. The book was to be produced in collaboration with academic staff and the student writer and was to be representative of all faculties. The process of producing the book was seen to be as important as the end product as it was planned to include colloquia with faculties for their feedback.

PHASE 2

Contact was made with each of the seven faculties at UWS Nepean (Commerce, Education, Engineering, Health Sciences, Humanities, Science and Technology, and Visual and Performing Arts) through Deans of Faculties. E-mail requests for suitable assignments were also sent to all teaching staff. Forty assignments from six faculties were received. Sixteen lecturers indicated their willingness to participate.

PHASE 3

After gaining an ethics clearance and formal student and lecturer consents, interviews were conducted. Students and lecturers were conducted separately. The transcripts of recorded interviews were analysed for suitable comments for annotating the assignments. Both lecturers and students were asked to indicate where and how critical practice is evident in the assignment. As well, students were asked to describe the process of developing critical practice in their work. Four pilot interviews were conducted, followed by the interviewing of the forty students and sixteen staff.

PHASE 4

One aspect of our Action Research into critical practice was to hold two colloquia to which all academic staff were invited. In an effort to make each colloquium as 'open' as possible, each was conducted as a two hour session. One was held on the Westmead Campus and an earlier one on the Werrington Campus. The

Werrington colloquium had participants from a wide variety of faculties: Health, Commerce, Humanities, Education, Visual & Performing Arts, as well as representatives from the Learning Centre and from Counselling and Health. Issues discussed included the critical practice objectives of staff, the differences in critical practice across disciplines, the nature of links between different kinds of knowledge, the variations of critical demands within faculties, the direction that appropriate teaching strategies may take, and definitions of critical thinking.

A substantial number of the Commerce faculty staff attended the second colloquium where discussion included the problem of critical thinking/practice for significant numbers of Nepean students, the importance of teaching critical thinking, the lack of consistency between lecturers' expectations regarding critical practice, and the need for academic guidance to ensure students develop analytical skills. At this colloquium it was decided to establish a quarterly newsletter to be disseminated across all faculties to share information regarding teaching critical practice, to share teaching strategies, to have a forum for ongoing debate, and to encourage contributions from both faculties and the student body.

After the colloquia sessions team members took responsibility for collating information to be incorporated into faculty section of the book. It soon became evident that not all assignments could be included in the book. Selection of the most appropriate texts (26) was undertaken in collaboration with the participating academic staff.

The data collected from the colloquia and from taped interviews assisted the project team members in writing the introductory sections to each Faculty section of the book and significant themes and issues related to that faculty.

PHASE 5

Currently the book *Critical Analysis - What is it?* is being evaluated by students and teaching staff at UWS Nepean by a process of questionaires, focus interviews and workshops. Colleagues from other universities (both learning support staff and faculty teachers) are also assisting in the evaluation. Copies of the book have been supplied and evaluation will take the form of focus interviews and questionaires.

FINDINGS

The rationale for producing a book of annotated sample texts is to provide opportunities for students to examine the numerous skills that critical thinking entails. In most faculty areas a minimum of two sample texts are provided. Each model also includes a lecturers' comments and students' explanations regarding the process they went through to successfully complete the assignment.

While keeping an open mind on the issue of whether critical thinking is a generalisable or a subject specific skill, the research team were surprised by the uniformity of critical practice demands within the institution. Broadly, these faculty expectations included being 'immersed' in the topic area; integrating

diverse points of view and relating theory to practice; and developing a personal position in relation to the topic. For purposes of brevity, the first two issues will be considered.

BEING IMMERSED IN THE TOPIC

Immersing oneself into the subject area means reading wider than the prescribed texts and developing an extensive knowledge base. One international nursing student reported she drew on a wide range of resources including textbooks, personal experience, the media, and other subject areas to obtain a broad yet deep understanding of the topic. A Maths student reporting on a problem solving assignment stated 'you don't always do what they (lecturers) say to do. If you use more knowledge than you need to, its really good...just keep fishing for information'. A Humanities lecturer expressed a similar viewpoint by advising her students 'try to take in new ideas that are confronting'.

The purpose of the immersion stage across faculties seems to be a preparation for making 'creative connections' within the subject area and this is for many students an aspect of critical thinking. Immersion in the subject matter allows the student to be aware of conflicting models/theories and to acknowledge these differences. Once this stage of immersion has occurred then students may be capable of going beyond the data and generalising from it: analysing, that is 'pulling apart ideas', and using critical skills to reconstruct an argument.

For first year undergraduate students in a new field of study, immersion is a beneficial strategy. However, many students struggle to achieve minimum requirements of a discipline and may find the demands of immersion a significant problem.

INTEGRATING KNOWLEDGE

Generally this is seen by students and lecturers as the ability to apply theory to texts (Humanities & Visual and Performing Arts); and/or applying theory to workplace situations (Science and Technology, Education, Nursing and Health Science). Integrating new texts with current or prior knowledge seems to follow from being immersed in a topic area. Aspects of integration include relating theory to practical situations and looking at the adequacy/limitations of some students integration which also includes awareness of implicit and explicit features of the question. This ability to discern the implications behind texts, was particularly valued by both students and lecturers in second/third year undergraduate programs. Students in all faculties reported that to successfully produce a text at this stage they needed to have time to allow ideas to 'gel'. A Science and Technology lecturer commented 'a high achieving student invests time for the mastery of skills. This needs to be a high priority'. A student in the same faculty reported 'one of my lecturers told me at the beginning of my degree if you want good marks you will not have a social life for the next four years. I wanted a good academic record so I gave up a lot'.

Integration is achieved in a variety of ways but the fundamental procedure seems

to include a questioning approach: 'Why did the lecturer set this topic?' (Commerce); 'What is the significance of this information?' (Nursing and Health Science); 'I always say why, why, why to myself' (Nursing and Health Science). Taking 'large periods of time to think' is reported by students to be a prerequisite for critical practice necessary to allow new information and concepts to be absorbed, and to allow multidimensional perspectives to be explored. Both immersion and integration as aspects of critical practice are raised by a Humanities student:

> A critical perspective is the result of hard work and extensive researching to expose yourself to a range of ideas. It is the ability to look at the theory and to see problems with it and to process it in such a way that it relates to key concepts [of the question].

On present indications the nature of critical practice within UWS Nepean has a high degree of homogeneity. Differences in critical perspectives nevertheless occur not just across faculties but within faculties. Such differences in emphasis in relation to particular critical thinking skills reflect perhaps the demands of a particular course, as much as the preferences and insights of lecturers who teach those courses.

An example of the variation of expectations towards critical thinking occurs within two departments of the Commerce faculty. One student when asked to explain her view on critical thinking reported that she centred her attention on trying to discern a motivation for a speaker or writer's perspective and 'not to accept information on face value'. Her lecturer provided an abstract definition which nevertheless incorporated aspects of the student's definition: critical thinking is 'the ability to evaluate the merits of an argument whether implicit or explicit by reference to some other standards that the students are able to identify independently'.

The second student raised aspects of critical practice which included 'understanding complex ideas; ability to condense information and the ability to write good summaries'. This student's perspective reflects the lecturer's concern to have students briefly articulate major ideas presented by ' respected authorities' in the field of study. Her lecturer's definition aligns with and extends the student's definition. The lecturer raised features such as 'comparing and contrasting ideas in the literature; identifying holes in theories and handling variables to suit own purposes'. Generally the data suggest that students tend to articulate at least partially the approach of their lecturers' critical thinking.

CHARACTERISTICS OF SUCCESSFUL STUDENTS

Two major factors seem to influence successful critical practice in written assignments: personal qualities and academic qualities. Personal qualities include persistence and dedication, taking initiative as an independent learner, and having confidence to make 'intuitive leaps'. Academic qualities consist of a range of skills and strategies such as making evaluations and judgements and forming

opinions. In short developing a deep approach to learning (Ramsden, 1992). A further notable feature was the synchronicity of ideas expressed by students and lecturers. This ability to be 'in tune' with the lecturer's perspective on a subject may have assisted students to interpret academics' expectations.

CONCLUSION

There is clear recognition that within Australia as well as in the US, critical thinking skills are poorly developed. This is a cause for considerable disquiet (Bailey 1992). Critical thinking or practice is perceived as an essential skill for successful university study. Yet critical thinking is not generally taught within the tertiary sector. With the advent of internationalisation of education as well as the introduction of mass education in recent times, the need has never been greater to make explicit for students some of the skills necessary to undertake effective critical practice in diverse educational settings. However, students are generally left to develop these skills *ad hoc*.

The product of our research, the book *Critical analysis - What is it?* is an intertextual document, that is a meeting place where students and academics gain new ideas, and the impetus to examine current analytical and critical practices and consider future possible directions for critical literacy.

In the last analysis, students need to create their own processes of critical practice. The publication and dissemination of our research will assist students in this process. Students can be helped to identify the strengths and weaknesses of their personal processes of critical thinking so that they can best present the knowledge they have attained. In some situations the project has highlighted the dichotomy between lecturers' values and student understandings of those values.

This project also allows lecturers to consider options of additional skills in order for students to develop appropriate critical practice skills. The project has encouraged collegial discussion within and between Faculties. Furthermore, certain common themes have emerged concerning the meaning of critical practice and how to demonstrate critical practice in assignments. Lecturers interviewed for this project indicated that critical thinking is a significant area of difficulty for many students. Given the emphasis on critical practice in universities, unmasking the process of critical thinking for undergraduate students appears an important goal.

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Literacy in the Disciplines: Giving Academics a Language to Talk about Language

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University policy on generic skills has caused many academics to seek greater control over literacy outcomes in their courses. While it is generally agreed that academic literacy is best developed within the disciplines, the responsibility tends to be located within the academic support program, the literacy expert collaborating with the subject specialist. A University of Canberra project aims to encourage academics to take the process one step further by increasing their capacity to provide guidance and constructive feedback to student writers. Typically lacking a language to talk about language, academic staff attend workshops led by a writing specialist, where they identify forms of exposition characteristic of their specialisation. The aim is to bring to the surface and to examine disciplinary assumptions about what constitutes "good" writing, providing the basis for a more explicit formulation of student writing tasks and improved feedback on student writing. The project extends the role of language experts, as they help academics to respond productively to student needs.

Background to the project

Employer surveys indicate the demand for communication skills in graduate employees, and a disquieting level of dissatisfaction with the status quo. In response to such surveys, many universities, including the University of Canberra, have adopted policies on generic skills, putting proficiency in communication at or near the top of the list of desired outcomes for graduates. Programs in the faculties are to be held accountable for their implementation of this policy.

Implementation becomes more urgent when we consider that university enrollments in 1996 have been such that tertiary entrance rankings have been reduced in many programs - sometimes into the 40 percentile. The link between low TER's and deficient literacy skills is not invariable, but experience tells us that students whose scores would not in the past have allowed for tertiary admission are at greater risk of failure when they encounter the discipline - specific demands. At the same time, the proportion of students from a language background other than English is increasing. (It is 20% at the University of Canberra and higher in other universities.) Thus, coincident with the foregrounding of faculty responsibility for language skills is the growing need

for academic literacy support in the student population. The combination of student demographics and employer pressure requires of academics a more concerted effort than has been the case in the past.

Current language and literacy theories tend to focus on the specific context in which literacy is developed; the first year university student is seen as an initiate into a new culture (or cultures), with the complex task of having to acquire the values and knowledge associated with that culture (Ballard, 1984). This definition is the basis for prolific research activity in the field of academic literacy, ranging from an exploration of language and literacy policy at tertiary level (Cowen, 1993, Fiocco, 1995) to the assessment of models of academic assistance (Baskin, 1995; Hicks et al, 1995). Researchers regard as axiomatic the need for academic writing skills to be taught in conjunction with discipline-specific practices.

At the conference held at La Trobe University in November 1994 - *Integrating the Teaching of Academic Discourse into the Disciplines* - overwhelmingly, and not surprisingly, the papers were given by participants who drew on experience in academic support services. The roles they describe are collaborative, either in helping to staff to design units which integrated learning and literacy skills with discipline content, or in going into the schools to present lectures and tutorials on issues related to academic literacy. In her paper, Brigid Ballard represents the study adviser as uniquely positioned to act as mediator between student and academic cultures; the study skills expert must be sufficiently familiar with, yet distant enough from, the definitive priorities of the disciplines to be able to map for the student the new discourses, the different ways of engaging with knowledge. This vantage point is hard won, for it can be gained only by experience. Ballard suggests that the cross-disciplinary overview, once achieved, must not be jeopardised by too close an association with any one discipline: the study adviser who is seconded into one particular faculty or department is in danger of losing awareness of the challenge facing students moving between disciplines.

Another possible role for the study adviser is to work with staff to develop sensitivity to student needs and an awareness of their own discourses to enable them to be more explicit about their expectations. Ballard doubts the efficacy of this role; staff attitudes, amounting to a kind of disciplinary chauvinism, constitute a barrier to change. I suggest that this might be too gloomy a view. In the first place, the majority of staff are not oblivious to the workplace and student pressures referred to above, and many are anxious to play a part in optimising the academic and vocational opportunities of their students. If academics are sufficiently motivated to seek the cooperation of the study adviser in preparation of course guides, for example, they may welcome opportunities to sharpen their own sense of what students need to know about the disciplinary discourse. Furthermore, collaboration is a two-way process, and if the efforts of study skills specialists are to be built on and sustained within the disciplines, it follows that academic staff need a certain level of awareness of the issues involved and the strategies available to them. It is the purpose of this project to go some way towards meeting this need, particularly as it relates to academic literacy.

DEVELOPMENT OF THE PROJECT

In 1995, the University of Canberra and The University of Newcastle were successful in their submission for funding from the National Priority (Reserve) Fund for a Literacy Support Program. One component of the program, to be conducted at Newcastle, was aimed at the provision of resource materials for students. The second component, to be conducted at UC, was the provision of resource materials and professional development for academic staff to encourage the integration of academic literacy support into the courses they teach. For both components, strategies and processes would be developed and trialled, then documented for use in tertiary institutions. The Newcastle component of the project is the subject of a paper by Robyn Woodward Kron, included in these proceedings. The complementary program at Canberra University commenced in mid-1995 with the appointment of a senior research officer, for a ten month term. Subsequent to the completion of the project in June 1996, a member of staff from the Centre for the Enhancement of Learning, Teaching and Scholarship will use the resource materials to conduct occasional workshops, ensuring that the enhancement of literacy skills continues to be a priority within the faculties. This, then, is a report on work in progress.

FACULTY-BASED WORKSHOPS

Workshops for academic staff were conducted at the end of the 1995 teaching year and prior to the first semester of 1996. One purpose of the first round of workshops was to publicise the project and to raise awareness of the need to develop strategies for integrating literacy skills into the disciplines. Central to the workshop discussion of academic literacy was a view of the new student as an initiate into a new culture - the academic culture - and at least one new style of discourse, depending on the number of disciplines studied. It was my intention in this workshop to highlight the degree to which cognitive and linguistic competence is relative to context. A writer's ability to meet the demands of high school assignments does not guarantee immediate success with university writing tasks: increasing complexity in conceptual load puts strain on grammar and syntax, and new ways of dealing with knowledge in the various sub-cultures require new and unfamiliar discourse structures. By stressing the extent to which academic success depends on linguistic proficiency, in turn a function of a student's mastery of discursive distinctions, I was seeking to put the literacy ball in the discipline instructor's court.

Stressing that students become competent readers and writers in the discourses of their disciplines by exposure and by osmosis, but also by modelling, practice and feedback, I invited participants to consider their practices - whether they were doing all they might do to facilitate this process of becoming academically - and professionally - literate. A brief questionnaire was the prompt for paired and subsequent group discussion.

What came out of the first round of workshops was a set of useful strategies,

some of which were familiar to most participants, others which were seized upon as valuable additions to existing practices. (One of the most valuable effects of getting a group of academics together is the cross -pollination that occurs.)

My contribution was an annotated essay or report - the aim to move the facilitative practice from instruction to demonstration. Throughout the first workshops I kept jargon at a minimum but, by making the sample annotated text a discussion point, I was able to begin to introduce a language to talk about language, to fine focus, as it were, on aspects of student writing that tend to escape comment for want of a conceptual framework. The November workshops are to be repeated in Newcastle in May; the processes and content of these and subsequent workshops are to be documented for inclusion in resource materials to provide the basis for subsequent workshops in the university.

In February, I conducted cross-disciplinary workshops on identifying and dealing with grammatical and syntactical errors in student writing, providing constructive feedback on written assignments, and determining ways to ensure that students act on such feedback. The particular thrust of these workshops reflects the preoccupations of many participants in the first round of workshops. ("Marking" asssignments is one of the more time-consuming of the academic's duties, and there is a general need to know that the time is well spent.) The point to be made here is that even with a nuts and bolts agenda, such issues as appropriacy of style, text features affecting coherence, and disciplinary attitudes to authorial voice arose quite naturally. The aim was still to raise an awareness of the writing act as one which has its own terminology, which can be talked about in relation to how ideas and text features interact, with characteristic structures which can be made explicit for the novice in the discipline.

In these workshops there was a lot to absorb; to reinforce new ideas, participants subsequently received a newsletter summarising the issues and strategies raised in discussion and notifying them of further developments.

FACULTY PROJECT OFFICERS

During the first round of workshops I was able to identify in each faculty one or two staff members willing to assist with the project. Guidelines for Faculty Project Officers relate to three principal activities: implementation of literacy enhancement strategies; the maintenance of records of these strategies and their outcomes; and the encouragement and assistance of others in the faculty who recognise the need for a constructive approach to the induction of student writers. Reports from Faculty Project Officers will form the basis for a collection of case-studies of successful practices, to be published as resource material in June: they were asked to record their own strategies, and those of others in the faculty, for integrating literacy skills into their teaching and assessment practices. At the same time, the Project Officers are my point of contact with the faculty, helping to disseminate information about workshops and literacy materials relevant to their disciplines. The project allows for remuneration of project officers to assist in their contributions to the project.

INTERACTION OF PROJECT PERSONNEL

Interaction between the officers conducting the Project is essential for the maintenance of unity of intention and focus, and for one of the second workshops, the Newcastle Project Officer travelled to Canberra. In May and June there will be an exchange of project officers between the University of Canberra and the University of Newcastle, with a view to trialling the materials and processes in workshops prior to preparation for publication in June, the final stage of the Project.

CONCLUSION

A view of academic literacy as contingent and relative underpins current thinking about student learning. If there is no one literacy for all learning contexts, the development of an inclusive overview of all the discourse options is certainly pre-requisite to the central provision of academic advice. The rationale for the academic literacy project described in this paper is that there is a need for a concerted approach to making disciplinary discourses more accessible to students, particularly those who may have a certain distance to make up in terms of language background or prior levels of achievement. Academics have the power and opportunity to foreground literacy as determinant of successful learning outcomes, but may fail to recognise their own assumptions and expectations, let alone make these explicit to the students in their disciplines. The project has the potential to extend the role of study advisers beyond the position of privileged outsider and into the area of staff development, as they help academics respond more productively to student needs. Subsequent collaboration between study adviser and staff is facilitated by the development of a stronger web of awareness and understanding of what it means to be literate within the disciplines. Those fearful of loss of territorial rights may be pleasantly surprised to find that they have gained in recognition and respect as practitioners in a previously unrecognised or, at least, under-rated area of expertise. Finally, students are the principal beneficiaries of a course of action that broadens the opportunities to become full members of their chosen disciplinary culture.

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Tertiary Literacy: Case Study Research into the Literacy Policies, Definitions and Practices of Four Disciplines within a University

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A social cultural view of language provides the theoretical framework for this research. Language learning theories suggest that the acquisition of literacy occurs within a specific social context and culture, and that literacy develops throughout one's life. This study examines how literacy is defined within the context and culture of a tertiary institution. It also examines how literacy development takes place in undergraduate students within the context and culture of their specific disciplines. This paper will present research undertaken within four case studies representing four different disciplines. The research describes views and attitudes of staff in the areas of: literacy policy within the university and their Schools; definitions of tertiary literacy; and best practice in language development. The paper will also discuss student perceptions of literacy practices within their Schools and their own definitions of literacy.

Introduction

This paper presents research in progress undertaken during a Masters by research degree, which focused on three aspects of tertiary literacy within an Australian University, that is, policy, definition and practice. The paper deals with research conducted in four Schools representing the disciplines of Social Science, Science, Health Science, and Business.

For almost ten years the literature on literacy both in the field of theory and practice, has presented propositions which are now regarded as axioms. In the late eighties and early nineties Luke (1988) and Gee (1990) established in their literature the tenet that literacy was a socially constructed term, and that any definition occurred within a social and political context. In addition to this principle, our own Australian Language and Literacy Policy in 1991 stated that "effective literacy is intrinsically purposeful, flexible and dynamic and continues to develop throughout an individual's lifetime". (Commonwealth of Australia, 1991:9). In the field of tertiary literacy, as early as 1987, Australian academics were specifically dealing with the fundamental principles of social cultural context in language, and the on-going development of literacy throughout one's life. The significant Australian monograph "Literacy by Degrees" by Taylor, Ballard,

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Beasley, Bock, Clanchy and Nightingale (1988) emphasised that literacy developed by degrees within a particular setting for a particular reason. Bock (1987) stated that "most students undergo an explosive language development during their three years of undergraduate study" (Bock in Taylor et al 1988: 30). However, Bock (1987) also concluded that many teachers at university level viewed the teaching of literacy as a contradiction to their academic goals, and that there was a failure to recognise that language and conceptual development extended simultaneously.

It was from the above views that the motivation for this research came. The research objective was to explore how literacy was perceived within a tertiary institution by those other than 'literacy experts'. Few academics working within the area of tertiary literacy development would refute the notion that literacy "is the prime foundation for acquiring and using knowledge...the competency that underlies and secures all major competencies" (Reid 1993:13). In reality, however, literacy may in fact be perceived by many academics and students from other perspectives which could impact significantly on what happens in the areas of literacy policy, definition and practice.

OVERVIEW OF THE STUDY

COLLECTION OF DATA

Four Schools within different disciplines were chosen for the purposes of this research so that each major teaching division within the University was represented. Specifically, when questions regarding policy and definition were addressed respondents were asked to reflect on the term 'tertiary literacy'. This focused on:

- what literacy policy was adopted by each individual School?
- how did staff and students define literacy?
- what do staff and students regard as best practice teaching models in the area of tertiary literacy development?
- what teaching practices are employed by teaching staff to foster the literacy development of students?

A total number of nineteen staff were interviewed in the case study and fifty two responded to questionnaires. One hundred and eighty five students across the four Schools, ranging from first to third years completed questionnaires. Whilst it is not possible within the parameters of this paper to report on all aspects of this research, a description and drawing together of emergent themes is presented in the areas of literacy policy, definition and practice.

SCHOOL PROFILES

Each School varied in staff and student population as indicated in table 1.0. The Schools with the greatest number of students from non English speaking backgrounds were School A and D followed with much smaller numbers by School B and C.

TABLE 1: PROFILES OF SCHOOLS IN THE CASE STUDIES

Case Studies	F/T Staff	U/G Students	Staff in Study	Students in Study
School A	27	870	16	52
School B	47	1151	18	40
School C	36	1061	24	52
School D	20	600	13	41

Each School in the study had identifiable strategies in place which contributed to the development of literacy. Table 2 provides a summary of these literacy programs.

TABLE 2: LITERACY UNITS AND PRACTICES IN EACH SCHOOL

Case Study	Description of Formal Units or Practices
A	1. A first year unit of one semester which focused on the mechanics of writing and discipline specific content. This unit was coordinated by a literacy expert and content lecturer. 2. A second year unit of one semester which focused on logic and was viewed as enhancing the literacy skills of students. This unit was offered outside the School. 3. A second year unit of semester which focused on ethics and was seen as an opportunity to develop writing skills. Coordinated by a content lecturer.
B	1. Three first year units which focused on content, writing and research skills. Taught and coordinated by content lectures. 2. Other second and third year units which included writing and research skills. Taught and coordinated by content lectures.
C	1. Diagnostic testing program which had been administered for the last five years at the time of this research. 2. If students failed the test they proceeded to a compulsory communications unit. Coordinated by a content lecturer. 3. A core content unit which combined content and the development of academic writing skills. A team teaching approach with content lecturers coordinating. 4. At second and third year unit which involved content

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	that leant itself to personal literacy development. Unit controllers content lecturers.
D	**1.** Diagnostic testing program which had been administered for at least seven years at the time of this research. **2.** If students failed the testing they proceeded to a remedial unit provided outside the School. **3.** Compulsory first year, one semester communications unit which combined content and literacy development. Unit controller: undergraduate coordinator. Tutorial input by literacy experts outside the School. **4.** Additional mandatory first year unit for at least one stream within the School. Unit controller: undergraduate co-ordinator. **5.** A third year writing unit associated with the discipline. Mandatory for at least two streams within the School. Unit controller: undergraduate coordinator.

LITERACY POLICY IN FOUR SCHOOLS

POLICY - DATA

For the purposes of this research, 'policy' was defined as a 'course of action' which was identified, supported and implemented by all staff in the School. This exploration of policy provided an understanding of the measures Schools had in place to further the literacy development of its students. Importantly, the research also shed some light on 'what' individual Schools perceived their responsibility to be in the area of literacy development and 'how' they were responding to this.

The tables below summarise salient comments made by staff in interviews, and illustrate questionnaire findings relating to the issue of policy. Firstly, all academic staff were asked if Schools should develop individual literacy development policies for their specific needs, and secondly, whether their School had such a policy operating.

DISCUSSION

As stated above each of the Schools had identifiable initiatives or units in place which were specifically perceived to be developing literacy, a perception which was shared by all staff. Whether these practices or initiatives can be 'termed policy' in the broad sense, is another matter. It is interesting to note the diverse processes by which these units or initiatives had come into practice. Whether the staff believed these practices constituted 'policy' within the School, and whether in fact 'policy' was perceived as particularly necessary.

TABLE 3

Should your School develop its own policy on literacy? Interview and Questionnaire.
N=number of respondents.

Case Study	Yes	No	Unsure	Interview Comments
A N=16	8	5	3	*"it would be helpful...whether these actions can be just as well developed and maintained with a broad consensus feeling is another issue"* *"we are trying I think to have a policy...it went badly wrong"* *"I look at action not what is written down"* *"yes but its very political..if we were to develop such a policy...it would exclude a lot of our students"*
B N=18	6	12		*"no..but translated to a curriculum"* *"policy not necessary as it is being dealt with under the umbrella of student progress"* *"yes we have an understood or consensus position"*
C N=24	10	5	5	No comments as all interviewees agreed. School already had a policy.
D N=13	10		3	No comments as all interviewees agreed. School had a policy

TABLE 4

Does your School have a literacy policy? Questionnaire and Interview.
N=number of respondents.

Case Study	Yes	No	Unsure	Interview Comments
A N=16	9	2	5	*"not a formal policy"* *"not an explicit policy but an implicit one"* *"there's nothing written down"* *"emergent policy in that we have certain activities running but no clear firm statement"* *"its very piecemeal...it seems to change from semester to semester"*
B N=18	7	8	3	*"no...but we have a commitment to it...its been translated into a curriculum statement"* *"no policy but a consensus position"* *"a policy no...a curriculum requirement yes"*
C N=24	20	1	3	*"yes it spells out what literacy means"* *"we agreed some years ago we would have a policy"* *"yes ...but not a complete consensus...but agreement we should have something"*
D N=13	11		2	*"yes we have to train students of course to be literate in the most general sense but also to be literate in relation to the profession"* *"Yes we also have consensus position from students point of view"*

CASE STUDY A

The School in case study A was a good example of the complexities involved in developing overall School policies. The responses given in answer to the question on whether the School had a policy or should develop one, reveals some anomalies. Keeping in mind that this School had in fact some literacy development practices in place, there was no obvious consensus amongst the staff that the School had implemented a policy or that the School should develop one. In reality the School was working very hard on a process of developing literacy initiatives but was still at a nascent stage, where staff were looking in many different directions to solve their literacy problems. Comments such as "it went badly wrong", "if we were to develop such a policy it would exclude a lot of our students", and "no clear firm statement", depict a confusion about the intent, objectives and delivery of what could be included in a literacy policy.

A central, unresolved issue which emerged in the interviews with staff of this School was the relationship between subject discipline content and language development. Within this School there was not an academic nor professional tradition where communication through writing was a focus. Although, over recent years it had been made perfectly clear by professional bodies linked to the School, that communication skills were found lacking. As a senior member of staff commented, communication skills "were a major part of being a professional...". The process of examining how language could be developed with content was proving exceedingly complex for the School for very obvious reasons. Firstly, staff had not themselves been trained in a setting where academic writing skills had been a focus. Secondly, there had been a relatively recent demand on staff to view language development from the perspective of their profession. The pedagogical relationship between language, academic content and the profession, and how they could be developed together, was proving to be complex, and at times politically volatile within the School. "The idea was to integrate ... [discipline content] and communication but the students' skills were so bad we are teaching remedial skills", "giving a few lectures and hoping students can write doesn't work...we refocussed it [the unit] on more literacy".

There was consensus about the need to improve literacy skills, "some staff are sceptical but can see its needed because in third year they can't write with the sophistication required", but ideas about implementation were confused and often polarised. Of the units that had been introduced in the School to improve literacy, comments such as these were made, "there are some subject issues we are not covering...some staff feel it is an inappropriate use of a core unit", and "some of the staff think it's a fluffy type unit".

There was also confusion about who should coordinate such units. Was it to be a literacy 'expert' or a discipline lecturer? Who should teach the language units and what were the responsibilities of all the staff? "It was always understood that staff development would also take place, this has gone by the wayside. Theoretically those teaching on the course will carry through those skills to their own unit".

Having an implicit policy rather than an explicit one was in fact not working within this School. In the words of the same senior member of staff quoted above, an implicit policy rather than explicit was in place regarding literacy because "it's a big step...to say in a professional technical type discipline ... to say we are going to bring in literacy". All staff agreed that there was a strong directive for literacy development from their professional body but no one was quite clear how the directive should be implemented.

CASE STUDY B

Staff within this School overwhelmingly affirmed that literacy was one of the objectives of the overall curriculum. During staff interviews comments and vocabulary emerged which focused on 'consensus', 'curriculum statements', and 'commitment', leading to what can be described as an integrated approach. This emphasis on curriculum planning illustrated the strategy employed by this School to achieve academic and affective objectives.

Firstly, within the School there was emphasis on a holistic approach in meeting all needs of their students. That is, preparing students for their profession and developing their language skills was very much seen as one in the same objective. Academic goals were achieved through curriculum design and a network of committees with both vertical and horizontal staff and student representation to implement curriculum goals. In reference to literacy policy it was stated, "we have something written in the new curriculum...there is a curriculum thread." There was also within the School a system in place which monitored students' academic progress. "A policy is not necessary as it [literacy] is being dealt with under the umbrella of student progress. If a student is not doing well we refer them to the Centre for International English or Counselling. I guess if there was a policy on literacy it may mean that perhaps the resourcing of such programs might be a whole lot better. "... I honestly believe that we do try and address the issue and I guess I think we do it fairly well".

Examining whether School B actually had a literacy policy is perhaps an exercise in the definition of the word policy. Whether the members of the School described their language development initiatives as policy or not, was not seen as such an important issue for the staff of this School. The most significant factors defining School B's position in the area of literacy development were that staff had developed an understood or consensus position and were doing something about it in terms of their overall curriculum. Most importantly also, the School had established practices through their curriculum development processes, which evaluated and monitored their language and literacy initiatives.

CASE STUDY C

The process of literacy development through policy can best be described for School C by the following interview comment: "we did not have a complete consensus but agreement that we should have something ... and we should do something about it". Staff were in accord to a great extent about the importance of literacy within the School, how it should be implemented, and the advantages

of articulating objectives within a policy. A key initiative was the administering of a diagnostic literacy test to all incoming students. Results from these tests were used to stream students into units specifically addressing literacy problems. "Yes we have been concerned for a five year period...we introduced a three year testing program to trial assessments of incoming first years. This decision was made at a School Board level...the Board emphasised the importance of literacy."

Interview comments illustrated that the process of policy making and implementation was well established and moving towards an evaluation phase in this School. "We agreed some years ago that we would have a policy...all School members were committed to that policy but we didn't monitor it. We don't have anything to check if people follow the policy, but collegial interaction and involvement." One staff member in describing staff involvement summed it up in the following way, "some are desperately committed, some committed and some vaguely or barely committed".

Although staff commitment might not be described as one hundred percent it was evident that the measures put in place five years before this research, had placed literacy on the list of the School's priorities. From the data gathered it was also evident that overall staff perspective was one that viewed literacy as an integral part of teaching and a core of the overall academic development of their students. "It is important for the University to say what is literacy for advancing knowledge of its graduates, and then I think at the School level we have to interpret that, and then come up with our own within the subject discipline focus for literacy. I see the University really providing a policy framework that we then work within".

CASE STUDY D

Similarly, School D had commenced a process to provide for literacy development some years before this research. Consequently, staff seemed to share common objectives and perceptions of how literacy should be addressed within the School. "We do not have a written policy on the development of literacy but we do have a consensus position on the importance of writing and maintaining appropriate standards". "Yes we have a policy in that we rigorously enforce entry requirements and we have two mandatory communication units and one optional unit".

There was a strong thread throughout the interviews that staff believed that literacy development in this School, was about being literate in the 'general sense', and also in relation to the profession students were preparing for in their undergraduate course. There was therefore, an accepted responsibility that literacy should be developed within the School, "yes, one of the reasons we have taken on the program within our School is that we feel that there are different types of literacy we have to train students of course to be literate in the most general sense but to be literate in relation to the profession..."

Findings

In describing the 'policies' of the four Schools certain characteristics emerge. Two Schools recognised a stated School policy on literacy development, one did not recognise a policy as such, but incorporated literacy in overall curriculum, and the last School had literacy practices in place, but they were not seen as School policy. Both Schools C and D had a history of up to seven years where literacy development had been placed on the School teaching agenda as something to be addressed. Staff in those Schools had decided to test the literacy levels of incoming students, and then implement core units coordinated by content lecturers to address literacy. These Schools as well as School B expressed clearly the need to prepare their students with a high level of literacy for their future professions. This sentiment was equally shared by School A but the 'how' issue was proving to be problematic for them. A characteristic shared by School A and D was that it attracted students who would not necessarily identify language as their area of strength, that is, native speakers and non-native speakers of English. Staff in both Schools believed that their students were surprised to find in their first few months at university that their lecturers placed such an important emphasis on language and being literate. School D, however, because of its longer involvement in literacy development had convinced the students that they would have 'the edge' over graduates from other Universities if they could write reports and communicate well. The significance and effect of years of this proselytizing lies in the fact that it was lead by the Head of Undergraduates in the School. This senior staff member coordinated and taught the units which incorporated language development. School A, however, because it was in the early stages of formulating policy, was still in the throes of not only convincing students of the benefits of improved literacy, but staff as well. In many ways it was School A with its emerging literacy policy that provided the most vivid picture of the issues that need to be dealt with at all levels of the School. The dilemmas of language 'versus' content, literacy teacher 'versus' content teacher, are those that require in depth discussion and understanding. It is evident that the dilemmas need not be so polarised, however, in the initial stages of policy making, these are the questions which may need to be addressed and resolved with staff participation.

Policy making can be visionary and imposed from the 'top' to motivate change, or it can be initiated from action and consensus. Consensus policy formation could include: investigation and research of the problem or situation, developing aims and objectives through consensus, explaining and promoting the stated aims, devising implementation strategies, promotion, delivery, review, evaluation and modification. It is through such processes that the nature of literacy could be explored by Schools. Addressing such questions as whether staff view literacy as a pragmatic skill or as part of a broad social cultural setting, and what theoretical assumptions are being made about tertiary literacy and its development. As is evident from the research findings, each of the four Schools had embarked on some of the above processes. They had addressed literacy development in diverse ways, reflecting the idiosyncrasies of the social cultural

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contexts of their Schools and discipline, and their particular 'history' in dealing with language issues.

LITERACY DEFINITIONS IN FOUR SCHOOLS

DEFINITIONS - DATA

All staff and students in the case studies were asked to give their own definition of tertiary literacy. From the interview and questionnaire analysis, re-occurring comments, specific vocabulary, and themes were evident. Four types of definitions emerged and are summarised below using the respondents' language.

1. Professional Definition: Being able to communicate and or function within the chosen career or discipline of the School.
2. Comprehensive Definition: Being able to communicate and express fluently, clearly and concisely a high level of cognitive skills, using extensive vocabulary and with few mechanical errors.
3. Functional Definition: Being able to understand the content and fulfil the university course requirements.
4. Gatekeeping Definition: Being able to meet the literacy entrance requirements as established by the university.

The last definition was given in an early part of the research with key administrative and academic staff on campus, but was not cited in the case studies. The responses from the staff and student questionnaires did not differ greatly from School to School. The table below summarises the percentage of all staff and students in the study defining tertiary literacy according to the first three categories outlined above.

TABLE 5: DEFINITIONS OF LITERACY GIVEN BY ALL STAFF AND STUDENTS.

Staff N=71: Students N=185

Definition	School A Staff Students	School B Staff Students	School C Staff Students	School D Staff Students
Professional	8%-15%	13%- 4%	0%-11%	36%-35%
Comprehensive	92%-37%	87%-53%	100%-45%	64%-35%
Functional	0%-48%	0%-43%	0%-44%	0%-30%

All staff responding to the questionnaire were also asked to respond to a statement which read "the definition of literacy for students in our School should be strongly linked with the demands of their chosen profession". It was immediately after this statement that space was provided for staff to give their own definition. The responses to this statement when compared to the above table require some

reflection. Table 5 illustrates the number of staff from each School who chose strongly agree/agree on their questionnaire.

TABLE 6: PERCENTAGE OF STAFF WHO AGREED THAT TERTIARY LITERACY SHOULD BE LINKED WITH A STUDENT'S CHOSEN PROFESSION.

Likert Scale 1-5: 1 = strongly agree = 5 strongly disagree

CASE STUDIES	% OF STAFF AGREEING
A	80%
B	64%
C	69%
D	66%

FINDINGS

From the data there seems to be consensus on two issues regarding definitions of literacy. Firstly, academic staff related tertiary literacy to the ability to express clearly and fluently the high order cognitive skills. Secondly, there was consensus amongst staff at this University, that definitions of tertiary literacy should be closely linked with the demands of the professions for which students were being trained. There was nothing in the comments of staff to indicate that they believed the comprehensive definition was one that led to being professionally literate, although, one could speculate that this might be so. Speculation, however, is not sufficient and further discussion would be necessary with the staff of each School to extrapolate exactly what they perceive the link to be between a 'comprehensive' definition of literacy and a professional definition. The understanding of such a link would provide further cognisance of whether tertiary teachers view literacy development as taking place within a social cultural context. That is, a context in which teachers impart knowledge, language, values and behaviour (Gee 1990).

In terms of student responses there was an understandable difference in perception of what literacy at a tertiary level might be. It is quite reasonable for students to declare "I'm literate if I can pass my university course" or "I've passed, I'm literate therefore I have the skills for my profession". These assumptions are however, not always valid, as is evidenced by the increasing frequency of professional bodies decrying the literacy standards of graduates.

LITERACY PRACTICES IN FOUR SCHOOLS

PRACTICE - DATA

Not all issues researched in the area of practice can be discussed within the scope of this paper. One of the most important aspects researched in the area of literacy practices was the staff and student perceptions of various teaching models for literacy development.

A number of different models were operating on campus at the time of the research, and those chosen for comment were those that the four Schools were most familiar with. All staff and students were asked to rate and or comment on them in terms of their 'support'.

Model 1: Literacy development should be incorporated in all discipline teaching and taught by content lecturers.

Model 2: Literacy should be developed through communication units taught by lecturers in the content area.

Model 3: Literacy should be developed through communication units, developed and taught by a literacy expert in conjunction with lectures in the content areas.

Model 4: Literacy should be developed through communication units provided by Schools with literacy expertise.

Table 7 provides a summary of how each model was rated by respondents who completed questionnaires in the case studies.

TABLE 7: STAFF AND STUDENT PERCEPTION OF LITERACY TEACHING MODELS.

Likert scale 1-5: 1 = least support - 5 = most support. Table illustrates percentage of staff and student respondents who gave four or five on the scale indicating support. # indicates model adopted by the School.

CASE STUDY	MODEL 1	MODEL 2	MODEL 3	MODEL 4
A STAFF	50%	60%	100%#	30%
A STUDENT	31%	47%	59%	47%
B STAFF	62%#	39%#	85%	31%
B STUDENT	26%	39%	56%	64%
C STAFF	58%	42%#	42%	26%
C STUDENT	52%	34%	62%	51%
D STAFF	63%	63%#	63%#	25%
D STUDENT	25%	63%	68%	40%